PCG-C1X/C11F (UC/UK)

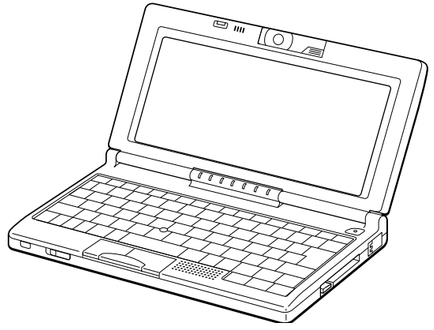
PCG-C1X/C1F

VAIO

PCG-C1X/C1F

SERVICE MANUAL

US/Canadian Model
PCG-C1X
UK Model
(PCG-C1F)



VAIO

9-974-499-11

Sony Corporation
Information Technologies Company

English
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Published by VAIO Customer Link Division (Japan)

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SONY

9-974-499-11

Notebook Computer

SONY®

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Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100˚C (212˚F) or incinerate.
Dispose of used battery promptly.
Keep away from children.

Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the (⚠ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires. therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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Section 1-1.

SONY

VAIO® C1 PictureBook™ Computer Read Me First

PCG-C1X

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This product contains software owned by Sony and licensed by third parties. Use of such software is subject to the terms and conditions of license agreements enclosed with this product. Some of the software may not be transported or used outside the United States. Software specifications are subject to change without notice and may not necessarily be identical to current retail versions.

Updates and additions to software may require an additional charge. Subscriptions to online service providers may require a fee and credit card information. Financial services may require prior arrangements with participating financial institutions.

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Welcome

Congratulations on your purchase of the VAIO® C1 PictureBook™ Computer with integrated digital camera. Sony has combined leading-edge technology in audio, video, computing, and communications to provide you with state-of-the-art personal computing.

Features

For a complete description of the specifications of your C1 PictureBook Computer, see page 20.

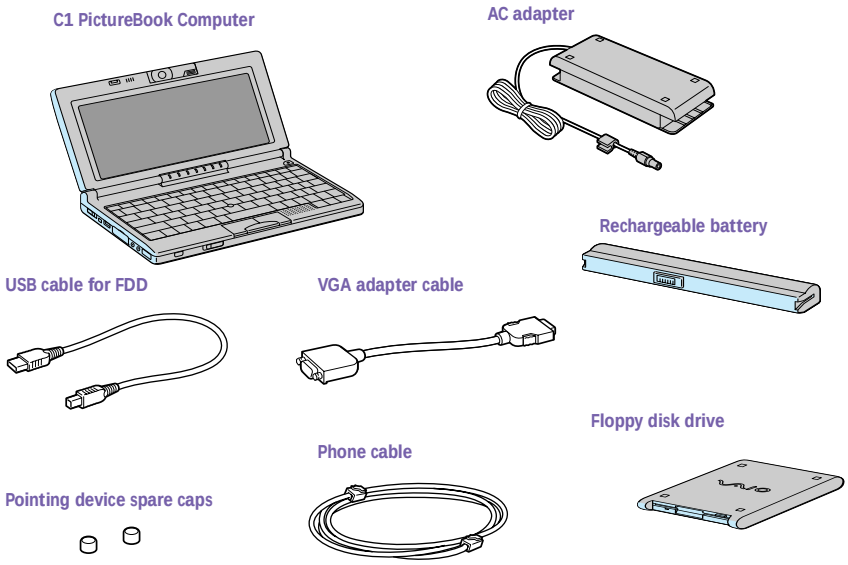
- **Integrated digital camera**: The C1 PictureBook Computer includes a built-in digital camera and a variety of software tools that integrate the camera with your computer. Capturing, manipulating, and communicating digital images is quick and easy.
- **Exceptional performance**: Your computer includes a fast Intel® Pentium® processor with MMX™ technology and a V.90 compatible data/fax modem.*
- **Portability:** The rechargeable battery pack provides hours of use without AC power. See “To charge the battery pack” in the User Guide for specific information on your model.
- **Sony audio and video quality:** The 8.9-inch XGA-width (1024 x 480) TFT LCD with XWIDE™ display technology supports high-quality MPEG1 video. Take advantage of today’s advanced multimedia applications, games, and entertainment software.
- **Windows® 98:** Your system includes the latest operating system from Microsoft.

* Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

- **Communications:** Access popular online services, send e-mail, browse the Internet, use fax features, and incorporate digital images into your electronic communications.
- **100 free hours of Internet access:** Use the Internet for up to 100 free hours when you sign up with GTE (no credit card required). Free access expires after 100 hours of use or 60 days after signing up—whichever occurs first. Use the Easy Internet Access icon on the desktop to sign up. If you have already signed up, the icon launches the Easy Internet Access browser.

Unpacking Your C1 PictureBook Computer

Remove the following hardware items from the box:



Manuals

- *Read Me First* (this manual) contains specifications, software descriptions, and quick tips on specific hardware and software issues.
- The *VAIO C1 PictureBook Computer User Guide* describes how to set up and use your computer.
- The *Microsoft® Windows®98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

To use these recovery CDs, you need to purchase the PCGA-CD5 CD-ROM drive.

Other

- Setting up your VAIO C1 PictureBook Computer (poster)
- Packet containing special product offers

Supplementary Information

For the most recent version of this manual, see the online version of *Read Me First*. You can access this document from the Windows Start Menu by selecting Programs / VAIO Documentation.

Power Management Tips

- If you find that an application exhibits unexpected behavior (such as reduced video quality) after returning from a reduced power consumption mode, you should close that application before your computer enters a power-saving mode.
- For maximum audio and video performance, use PowerPanel to select either the AC Power Profile or the Power Management Off profile.
- If your battery level falls to less than 10 percent, you should either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.

If Your Computer Does Not Start

- Check that the computer is plugged into a power source and that it is turned on. Check that the power indicator on the front panel of the computer indicates that the power is on.
- Check that the battery is inserted properly and that it is charged.
- Make sure there is no diskette in the floppy disk drive.
- Confirm that the AC adapter and all cables are connected firmly, as described in “Connecting Peripheral Devices” in the *VAIO C1 PictureBook Computer User Guide* that came with your computer.
- If you plugged the computer into a power strip or UPS, make sure the power strip or UPS is turned on and working.
- If you are using an external display, check that it is plugged into a power source and turned on. Check that the brightness control is adjusted correctly. See the manual that came with your display for details.

- Moisture condensation may have occurred. Do not use the computer for at least one hour and then turn on the computer.
- When the internal backup battery is low on power, it may not be able to boot your system properly. You can correct this situation as follows: Plug in the AC adapter and allow the computer to charge for one hour while it is connected to AC power. Do not use the computer during this time. After one hour, turn the power off and then on again. To charge the internal backup battery fully, keep the AC adapter connected for more than 24 hours after turning the power on. You can use your computer while charging the battery.

Applications That Use the TWAIN Driver

Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to import images to your computer from an external device, such as a scanner or digital camera. When you select a device, a TWAIN driver window appears on the screen. You should always close the TWAIN driver window before exiting or minimizing a digital imaging application.

Programmable Power Key

If you wish to use the Programmable Power Key (PPK) to read your e-mail or launch a web browser, you need an Internet connection and you must use Microsoft Outlook. In order to use PPK with your free Easy Internet Access account, follow these steps:

1. Register your computer and sign up for free Internet access.
2. Launch Microsoft Outlook and verify that you can send and receive e-mail using your free Easy Internet Access account.

Hardware Temperature

The AC adapter or the bottom panel of your computer may become warm. This is the result of CPU operation and does not indicate a malfunction of the computer. The actual temperature varies depending on the peripherals and software you are using and the length of time that the unit is in use.

! **Do not cover the computer or adapter with clothing or blankets when the computer is turned on. Covering these components may result in damage to your unit.**

When connecting the supplied AC adapter to an AC outlet that has more than two outlets, do not plug the AC adapter into an outlet that is obstructed by another adapter. To prevent fire or electrical shock, the adapter must be firmly plugged into the outlet. If necessary, use a separate AC outlet.

Using Smart Capture to Send Still and Video Images by E-mail

To send images by e-mail using the MAIL button in Smart Capture, you must first set up your e-mail software to send and receive mail. When sending a video image to a recipient for the first time, you must include the VDOWave3 Codec decoder. When compressing the image, select the Attach decoder check box on the Compressed Images Advanced Settings screen. The decoder allows the recipient to view the compressed video image.

If you use an online service provider such as America Online or other non-MAPI-compliant e-mail software, use the SAVE button to save the image as a file and then attach the file to your e-mail message. When sending a video image to a recipient for the first time, you must include the VDOWave3 Codec decoder. The file name is VDODecode30.exe and is located in C:\Program Files\Sony\Smart Capture\Decoder.

In order for the recipient of a video image to view your file, the recipient must first install the VDOWave3 Codec decoder by running the executable file (VDODecode30.exe). The recipient can verify the installation by opening the Multimedia Component of the Control Panel. The list of Video Compression Codecs under the Devices tab should include the entry “VDOnet VDOWave3 (Scalable) Advanced Video Codec”.

About the Software on Your Computer

Your C1 PictureBook Computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see "For Answers to Your Software Questions."

Adobe Acrobat® Reader

Adobe Systems Inc.

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Business Edition

Adobe Systems Inc.

Create amazing photo effects with Adobe PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe®

CompuServe, Inc.

CompuServe is the most comprehensive source of organized business and educational information online today. CompuServe allows you to access the vastness of the Internet, without wasting time wading through it. Maximize your time online with CompuServe.

Digital Media Park™

Sony Electronics

An integrated suite of multimedia cataloging and playback programs, including Media Bar, Media Library, and Media Showcase. Manage your music by cataloging your entire CD collection.

Dr. Solomon's® Anti-Virus

Dr. Solomon's Software Inc.

Dr. Solomon's Anti-Virus provides the most comprehensive defense against the spread of viruses, including macro viruses. It can scan inside compressed files and automatically protects your system against viruses sent via e-mail or Internet download.

DVgate™ Still

Sony Electronics

Connect a digital video camera recorder to the i.LINK™ connector and capture your own still images. You can save your images in a variety of popular file formats.

EarthLink Sprint TotalAccess™

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6MB web site, a member magazine, and 24-hour technical support.

Microsoft® Internet Explorer for Windows® 98

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you're on the web!

Microsoft® Money 99

Microsoft Corporation

Microsoft Money 99 is personal finance software that lets you perform your financial tasks, everything from paying bills to planning for the future, in a smarter, faster way. With Money's online services, you can pay bills and bank from the comfort of home.

Microsoft® Outlook® 98

Microsoft Corporation

Outlook 98 is Microsoft's premier messaging and collaboration client. It combines the leading support for Internet standards-based messaging systems with integrated calendar, contact, and task-management features.

Microsoft® Works

Microsoft Corporation

Works provides users with a set of core tools that allows them to write letters and reports, track family and friends with the address book, manage home finances, and create a home inventory.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the web, send Internet e-mail, chat, read newsgroups, and compose great web documents.

PictureGear™

Sony Electronics

This image management software displays images from your hard drive, a Sony Digital Still Camera, or a Sony Mavica® Camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet™

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content such as sports scores, stock quotes, news, and easy access to Excite™, plus a personal e-mail account and quality customer service, all at a competitive price.

Quicken® Basic 99

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, loans. You can even pay your bills online.

Smart Capture

Sony Electronics

Smart Capture is the software that allows you to operate your computer's built-in camera. Smart Capture lets you use the built-in camera as a digital or video camera, recording still images, motion, and sound. Whatever you record with the camera can be viewed with the built-in movie player or still-picture viewer.

Smart Label

Sony Electronics

This tool allows you to record your voice and play it back at any time to remind you of important information, such as telephone numbers or appointments. It can also be used as a normal text memo pad. It can record a voice memo up to 60 seconds long. You can combine this with pictures and / or text to create a memo that you can place on your computer desktop.

Smart Publisher™

Sony Electronics

Smart Publisher makes it easy for you to combine pictures, movies, and text to create web pages and send them to the Internet using e-mail or FTP.

Smart Write

Sony Electronics

A word processor that allows you to create documents that incorporate pictures, movies, and sound. With Smart Write, you can record your voice right into the page and draw directly onto your documents with the computer "pencil."

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use user interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Acrobat® Reader, Adobe PhotoDeluxe® Business Edition (Adobe Systems Incorporated)

website	http://www.adobe.com/
phone	206-628-2746 (fee-based support)
fax	206-628-5737
e-mail	techdocs@adobe.com
hours	M-F, 6 AM-5 PM PT

America Online® (America Online)

website	http://www.aol.com/
phone	800-827-3338
hours	7 days a week, 24 hours a day

AT&T WorldNet® Service (AT&T)

website	http://www.worldnet.att.net
phone	800-400-1447
e-mail	worldnet@attmail.com
hours	7 days a week, 24 hours a day

CompuServe® Interactive (CompuServe Interactive, Inc.)

website	http://www.compuserve.com/
phone	800-848-8990
hours	M-F, 8 AM - 1 PM ET, S-S 10 AM - 10 PM ET

Dr. Solomon's® Anti-Virus (Dr. Solomon's Software Inc.)

website	http://www.drsolomon.com/
phone	888-377-6566
e-mail	support@us.drsolomon.com
hours	7 days a week, 24 hours a day

EarthLink® (EarthLink Network, Inc.)

website	http://help.earthlink.net/techsupport/
phone	800-395-8410
e-mail	support@earthlink.net
hours	7 days a week, 24 hours a day

Windows 98 Operating System, Works, Money, Internet Explorer (Microsoft Corporation)

website	http://www.microsoft.com/support/
phone	888-4SONYPC (888-476-6972)*
hours	7 days a week, 24 hours a day

*Support from 1-888-4SONY PC is free of charge for 90 days after the original date of purchase.

Netscape Communicator® (Netscape Communications Corporation)

website	http://www.netscape.com/
phone	888-4SONYPC (888-476-6972)*
hours	7 days a week, 24 hours a day

*Support from 1-888-4SONY PC is free of charge for 90 days after the original date of purchase.

Prodigy Internet™ (Prodigy Communications Corporation)

website	http://www.prodigy.com/
phone	800-PRODIGY
hours	7 AM - 3 AM ET

Quicken® Basic (Intuit Inc.)

website	http://www.intuit.com/support
phone	900-555-4688
hours	7 days a week, 24 hours a day

WinFax® Basic Edition (Symantec Corporation)

website	http://www.symantec.com/techsupp/winfax/
phone	Standard Care 716-843-1090 (U.S.) or 416-441-3301 (Canada). Standard Care support is free for all registered users for 90 days from the date of their first call.
hours	M-F, 9 AM - 7 PM ET

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972).

Specifications

Model	PCG-C1X
Processor	266 MHz Pentium® with MMX™ technology
Hard Disk Drive	4.3 GB
Integrated Camera	270,000 pixels (effective 250,000 pixels)
Image Device	1/6 inch 270,000 pixel CCD
Lens	2 elements in 2 groups f = 2.8 mm, F = 2.8
Exposure Control	Automatic control
White Balance	Automatic
Number of Colors	24 bit RGB
Image Size	80 x 60, 100 x 120, 320 x 240
Number of Displayed Frames	30 frames/s (max., overlay) Video for Window version 1.1 or later
Standard RAM	64 MB SDRAM, expandable to 128 MB
LCD Screen	8.9" XWIDE™ Active Matrix XGA TFT (1024 x 480)
L2 Cache Memory	256 KB Multibank® DRAM
MPEG	MPEG1 Digital Video
Graphics	128-bit accelerator with 2.5 MB Video RAM
Sound Capabilities	16-bit CD-quality stereo sound
Diskette Drive	External 3.5" 1.44 MB (cable included)
Modem	K56flex and V.90 compatible data/fax modem*
Infrared	Supports 4 Mbps, 1.1 Mbps, and 115 kbps IrDA standard
Expansion Capabilities	One PCMCIA type II card Zoomed video and card bus support
Built-in Capabilities	Digital camera Mono microphone Mono speaker
Telecommunication Capabilities	Fax send/receive
Connection Capabilities	Phone line (RJ-11) USB port Stereo headphone Microphone in VGA monitor i.LINK

Model	PCG-C1X
Supplied Accessories	Floppy disk drive Rechargeable battery AC adapter Phone cable VGA adapter cable Pointing device spare caps USB cable for FDD
Service	90-day limited express service† Extendible to one year from original date of purchase upon registration
Limited Warranty	90-day parts / labor standard† Extendible to one year from original date of purchase upon registration
Power Requirements	34 watts maximum (16V DC / AC100-240V)
Power Management	Energy Star Compliant Advanced power management (APM) version 1.2
Battery	Lithium-ion
Dimensions	10.63” (w) x 1.45” (h) x 5.51” (d) (270 mm x 37 mm x 140 mm)
Weight	2.42 lbs. (1.1 kg) (with supplied battery)
Operating Temperature	40ºF to 95ºF (+5ºC to 35ºC)

* Maximum speed for faxing is 14.4 kbps. Your modem is capable of downloading at 56 kbps using K56flex technology or V.90. Your online service or Internet Service Provider, however, may not support this technology or operate at this speed.

† Certain restrictions apply.

Specifications are subject to change without notice.
This product meets the standards of the International Energy Star Program for energy efficiency.

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Section 1-2.

SONY

VAIO® C1 PictureBook™ Computer User Guide

PCG-C1X

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As an ENERGY STAR Partner, Sony Corporation has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

The International ENERGY STAR Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles and copiers. Their standards and logos are uniform among participating nations. ENERGY STAR is a U.S. registered mark.

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All other trademarks are trademarks of their respective owners.

Safety Information

Owner's Record

The model number and serial number are located on the bottom of your VAIO C1 PictureBook Computer. Record the serial number in the space provided here. Refer to the model and serial number when you call your Sony Service Center.

Model Number: PCG-C1X

Serial Number:_____

WARNING

- To prevent fire or shock hazard, do not expose your notebook computer to rain or moisture.
- To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.
- Never install modem or telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- Never touch uninsulated telephone wire or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Avoid using the modem during an electrical storm.
- Do not use the modem or a telephone to report a gas leak in the vicinity of the leak.
- A socket outlet should be as close as possible to the unit and easily accessible.

AVERTISSEMENT

- Pour prévenir tout risque d'incendie ou d'électrocution, garder cet appareil à l'abri de la pluie et de l'humidité.
- Pour prévenir tout risque d'électrocution, ne pas ouvrir le boîtier. Confier l'entretien de cet appareil exclusivement à un personnel qualifié.
- L'appareil doit être le plus près possible d'une prise murale pour en faciliter l'accès.

Regulatory Information

Declaration of Conformity

Trade Name: SONY

Model No: PCG-C1X

Responsible Party:
Sony Electronics Inc.

Address:
1 Sony Drive
Park Ridge, NJ 07656

Telephone No.: 201-930-6970

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Only peripherals (computer input / output devices, terminals, printers, etc.) that comply with FCC Class B limits may be attached to this computer product. Operation with non-compliant peripherals is likely to result in interference to radio and television reception.

All cables used to connect peripherals must be shielded and grounded. Operation with cables, connected to peripherals, that are not shielded and grounded, may result in interference to radio and television reception.

FCC Part 68

This equipment complies with Part 68 of the FCC rules. On the bottom of this equipment is a label that contains, among other information, the FCC equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This modem uses the USOC RJ-11 telephone jack.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

If the terminal equipment (PictureBook Computer PCG-C1X) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operations of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment (VAIO C1 PictureBook Computer PCG-C1X), please contact 1-888-4SONYPC (1-888-476-6972), or write to the Sony Customer Information Center, One Sony Drive, Park Ridge, NJ 07656, for repair and / or warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you to remove the equipment from the network until the problem is resolved.

Repair of this equipment should be made only by a Sony Service Center or Sony authorized agent. For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972).

This equipment cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state and possible provincial tariffs. (Contact the state or provincial utility service commission, public service commission or corporation commission for information.)

Telephone Consumer Protection Act of 1991 (United States)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone facsimile machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual.

In order to program this information into your facsimile machine, see your fax software documentation.

Telephone Consumer Guidelines (Canada)

Please refer to your telephone directory under 'Privacy Issues' and / or 'Terms of Service.' For more detailed information, please contact:

CRTC
Terrasses de la Chaudiére, Tour centrale 1
promenade du Portage, 5 étage, Hull PQ
K1A 0N2.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la class B est conforme à la norme NMB-003 du Canada.

DISPOSAL OF LITHIUM ION BATTERY

You can return your unwanted lithium ion batteries to your nearest Sony Service Center or Factory Service Center.

In some areas the disposal of lithium ion batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you, call 1-888-476-6972 in the United States, or 1-800-961-7669 in Canada.

! **Do not handle damaged or leaking lithium ion batteries.**

! **Ne pas manipuler les batteries au lithium-ion qui fuient ou sont endommagées.**

! **Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.**

! **Une batterie non conforme présente un danger d'explosion. La remplacer seulement par une batterie identique ou de type équivalent recommandé par le fabricant. Évacuer les batteries usées selon les directives du fabricant.**

! **The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 212°F(100°C) or incinerate. Dispose of used battery promptly. Keep away from children.**

! **La manutention incorrecte du module de batterie de cet appareil présente un risque d'incendie ou de brûlures chimiques. Ne pas démonter, incinérer ou exposer à une température de plus de 100°C. Évacuer promptement la batterie usée. Garder hors de portée des enfants.**

INDUSTRY CANADA NOTICE

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.

The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Equipment malfunctions or any repairs or alterations made by the user to this equipment may give the telecommunications company cause to request the user to disconnect.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of

any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed 5.

AVIS DE L'INDUSTRIE CANADA

AVIS: L'étiquette d'Industrie Canada identifie le matériel homologué.

Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

AVIS: L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface.

La terminaison d'une interface téléphonique peut consister en une combination de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

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Welcome

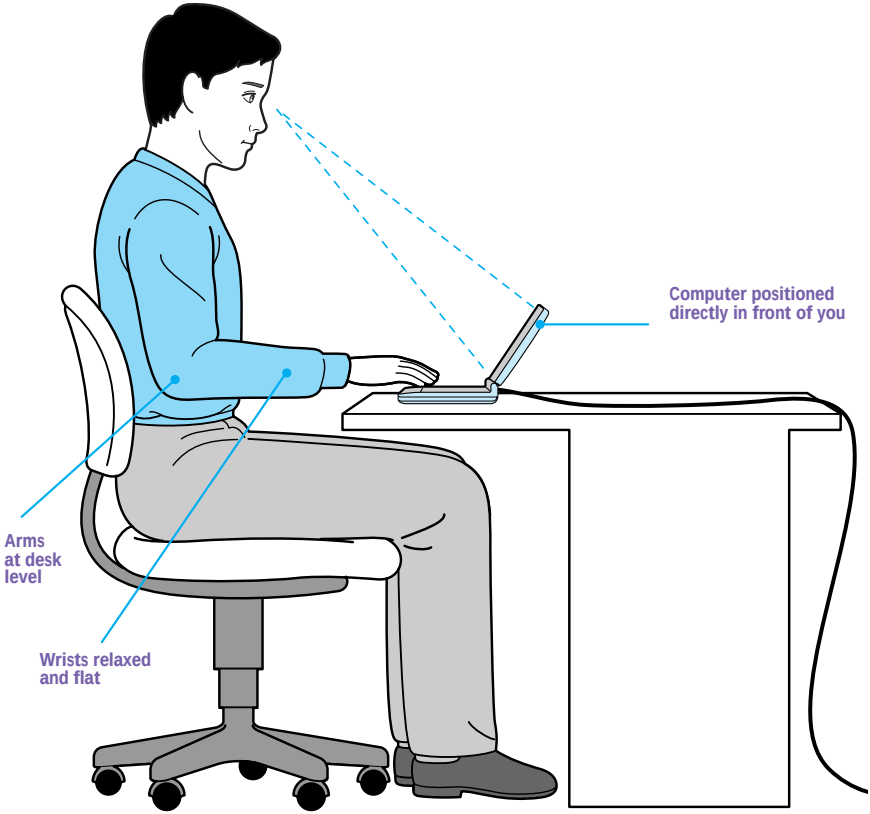
Congratulations on your purchase of the VAIO® C1 PictureBook™ Computer with integrated digital camera. Sony has combined leading-edge technology in audio, video, computing, and communications to provide you with state-of-the-art personal computing.

This manual offers a quick introduction and reference to your Sony computer.

- **Using Your VAIO C1 PictureBook Computer** shows you how to use the standard components of your system.
- **Connecting Peripheral Devices** explains how you can add functionality by connecting various peripherals.
- **Getting Help** explains the support options available to you and offers basic troubleshooting tips.
- **Notes on Use** provides facts and advice about using your notebook computer.
- **Limited Warranty Statement** provides your product warranty statement and explains how to extend your warranty for an additional nine months.

Ergonomic Considerations

You will be using your C1 PictureBook Computer as a portable device in a variety of environments. Whenever possible, you should attempt to apply the following ergonomic considerations to both stationary and portable environments.



- **Position of your computer –** Place the computer directly in front of you as you work. Keep your forearms horizontal, with your wrists in a natural, comfortable position while using the keyboard, pointing device, or external mouse. Let your upper arms hang naturally at your sides. Take breaks during sessions with your computer. Excessive use of the computer may strain muscles or tendons.

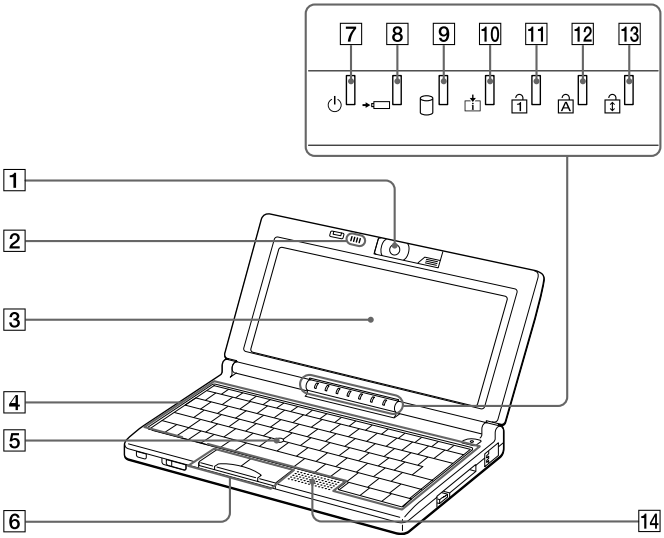
- **Furniture and posture –** Sit in a chair with good back support and armrests. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable. Sit in a relaxed, upright posture and avoid slouching forward or leaning far backward.
- **Viewing angle of the computer's display –** Use the display's tilting feature to find the best position. You can reduce eye strain and muscle fatigue by adjusting the tilt of the display to the proper position and by adjusting the brightness settings of the display.
- **Lighting –** Choose a location where windows and lights do not create glare and reflection on the display. Use indirect lighting to avoid bright spots on the display. You can also purchase accessories for your display that help reduce glare. Proper lighting adds to your comfort and work effectiveness.
- **Placement of an external display –** When using an external display, set the display at a comfortable viewing distance. Make sure the display screen is at eye level or slightly lower when you are sitting in front of the LCD screen.

Using Your C1 PictureBook Computer

This section describes how to start using your computer and how to use your computer's internal and external devices, such as the pointing device and floppy disk drive.

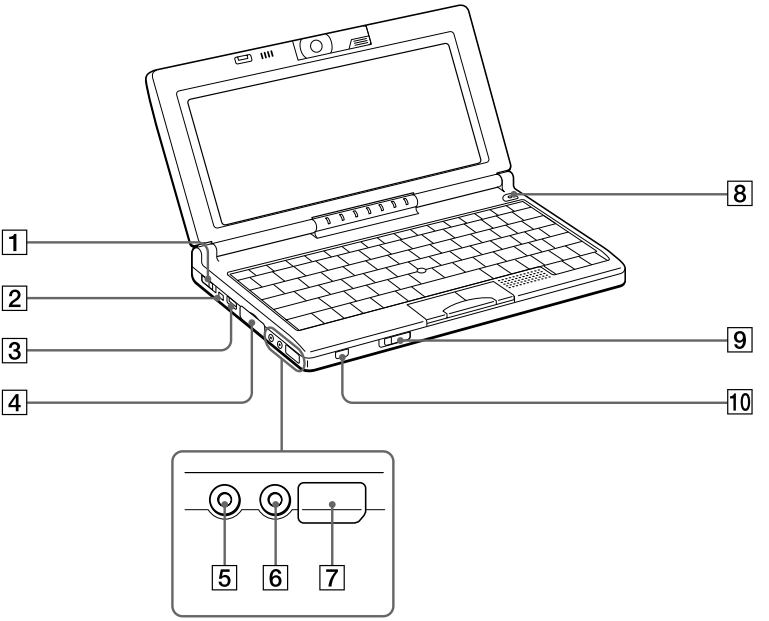
Locating the Controls and Connectors

Front



1 Built-in camera
2 Microphone
3 LCD screen
4 Keyboard
5 Pointing device
6 Left/Center/Right button
7 Power indicator
8 Battery indicator
9 Hard disk drive indicator
10 Information indicator
11 Num Lock indicator
12 Caps Lock indicator
13 Scroll Lock indicator
14 Speaker

Left



1 Power switch

2 S200 i.LINK™ (IEEE1394)

3 USB connector

4 Monitor connector

5 Microphone connector

6 Headphone connector

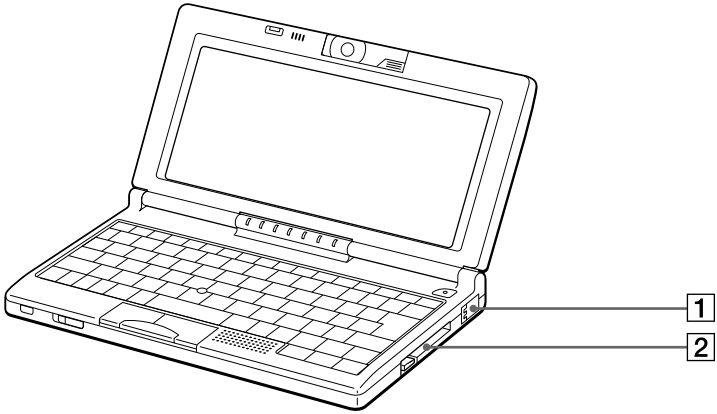
7 Infrared port

8 CAPTURE button

9 LCD lock lever

10 Programmable Power Key (PPK)

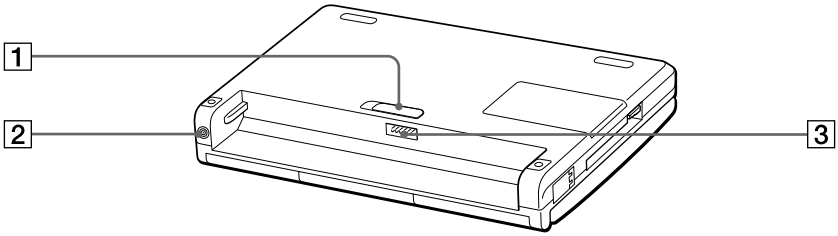
Right



1 Phone line jack (page 34)

2 PC card slot (page 25)

Bottom



1 Battery release lever (page 11)

2 DC In connector (page 8)

3 Battery connector

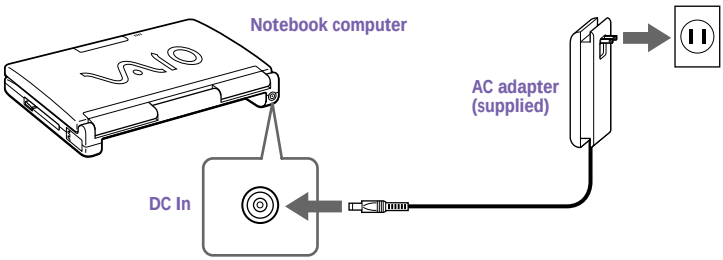
Connecting a Power Source

You can use either AC power or a rechargeable battery pack as a power source.

Using the AC Adapter

1 Plug the cable attached to the AC adapter into the DC In connector on the computer.

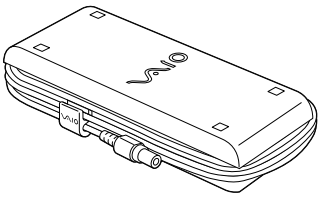
2 Pull the prong on the AC adapter upwards and plug it into an AC outlet.



To remove the AC adapter

1 Unplug the AC adapter from the AC outlet and the adapter cable from the DC In connector on the computer.

2 Align the adapter cable with the groove on the AC adapter and wrap the cable around the AC adapter.



Using Battery Power

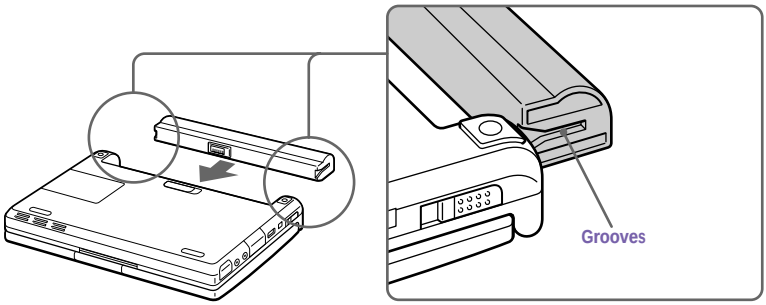
You can use a battery pack as a source of power. The PCGA-BP11 battery pack that comes with your computer is not fully charged at the time of purchase. Follow the steps below to insert and charge the battery pack.

You can also purchase the high-capacity PCGA-BP12 battery pack as a separate option.

See "Using Power Saving Modes" on page 30 for power management information.

To insert the battery pack

Align the grooves on the battery with the notches on the back of the computer, and then slide the battery towards the computer until it clicks into place.



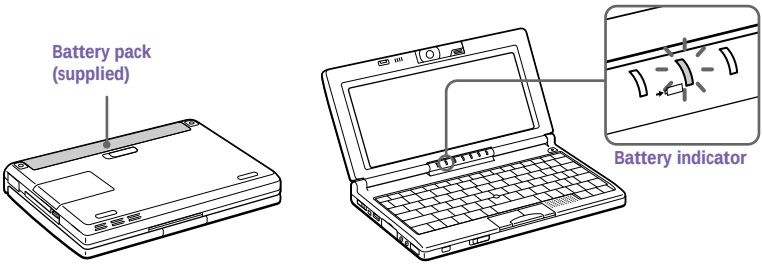
To charge the battery pack

1 Connect the AC adapter to the computer.

2 Insert the battery pack.

The computer automatically charges the battery (the battery indicator light flashes in a double blink pattern as the battery charges). When the battery is 85% full, the battery indicator light turns off. This process takes approximately one and one half hours. To charge the battery completely, continue charging for an additional hour.

The battery indicator above the keyboard indicates the status of the battery pack.



Battery Indicator Light Status	*Meaning*
On	The computer is using battery power.
Single blink	The battery is running out of power.
Double blink	The battery is charging.
Off	The computer is using AC power.

Both the battery and power indicators blink when the battery is running out of power.

Keep the battery pack in the computer while it is directly connected to AC power. The battery pack continues to charge while you are using the computer.

If your battery level falls to less than 10%, you should either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.

You can extend battery life by changing the power management modes in the PowerPanel utility. See "Using Power Saving Modes" on page 30.

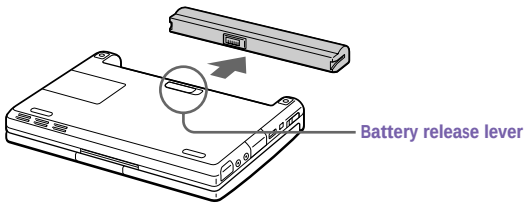
The battery pack supplied with your computer is a lithium ion battery and can be recharged at any time. Charging a partially discharged battery does not affect battery life.

The battery indicator light is on while you use the battery pack as a power source. When battery life is nearly depleted, the battery indicator starts flashing.

For some software applications and some peripheral devices, your computer may not enter system hibernation mode when the battery life is low. To avoid loss of data when using battery power, you should save your data frequently and manually activate a power management mode, such as system suspend or system hibernation.

To remove the battery pack

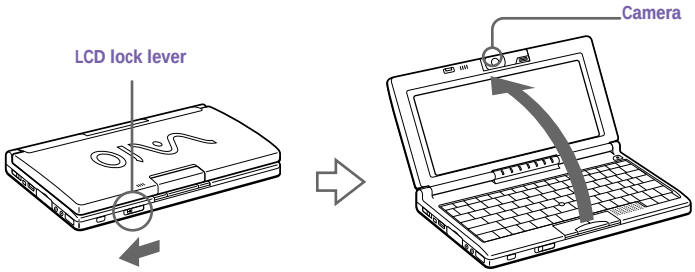
1. Turn off the computer.
2. Slide the release lever to the UNLOCK position and slide the battery away from the computer.



You may lose data if you remove the battery pack while the computer is on and not connected to the AC adapter or if you remove the battery while the computer is in System Suspend mode.

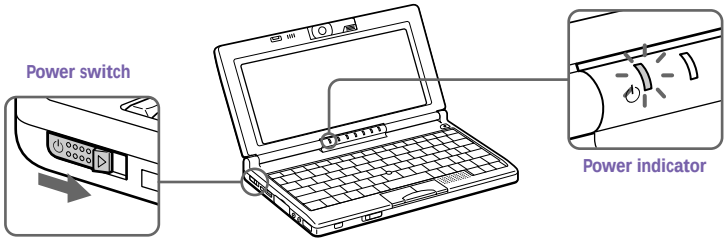
Starting Your C1 PictureBook Computer

1 Slide the LCD lock lever in the direction of the arrow, and lift the cover.



Be careful not to grab the camera lens when lifting the cover.

2 Slide the power switch on the left side toward the front of the computer until the green power indicator light turns on.



If you hold the power switch in the On position for more than four seconds, the computer turns off.

3 If necessary, adjust the brightness controls for the LCD display. To decrease the brightness, press Fn+F5 and then the down or left arrow key. To increase the brightness, press Fn+F5 and then the up or right arrow key.

Shutting Down Your C1 PictureBook Computer

! **To avoid potential loss of data, follow these steps to shut down your computer.**

1 Click the Start button on the Windows 98 taskbar.

2 Click Shut Down at the bottom of the Start menu to display the Shut Down Windows dialog box.

3 Select Shut down.

4 Click OK.

Respond to any prompts warning you to save documents.

5 Wait for your computer to turn off automatically. The power indicator turns off.

6 Turn off any peripherals connected to your computer.

If you are unable to shut down your computer using the steps described above, press the Ctrl+Alt+Delete keys at the same time to restart the computer. If you are unable to restart the computer in this way, you can slide the power switch forward and hold for four seconds. This operation may result in loss of any unsaved data.

During a period of inactivity, you can conserve battery life by using System Suspend mode. See “Controlling Power Management” on page 45.

Be sure to turn the camera lens toward you before closing the cover.

Registering Windows® 98

The first time you turn on your computer, you need to complete a few steps to register and configure the Windows 98 software that is already installed on your computer.

You must register Windows 98 before you can use the computer.

The on-screen instructions guide you through the registration and configuration process. The following is an overview of the process.

1 Gathering information:

- Enter your name.
- Read and accept the License Agreement.
- Enter your Certificate of Authenticity number located on the cover of the Microsoft Windows 98 *Getting Started* manual.

2 Windows 98 setup: click the Finish button on the Windows 98 Setup Wizard screen.

3 Selecting your computer settings: if necessary, change the Time Zone, Date and Time on the Date/Time Properties screen.

4 Registering your computer: for details on registering your computer, see “Registering Your Computer” on page 15. You can also sign up for your 100 free hours of Internet service at this time.

5 Learning about Windows 98:

- If you choose, take the tour of Windows 98.

Registering Your Computer

You can take advantage of Sony's commitment to quality customer support and receive the following benefits by registering your computer with Sony:

- **Extended Limited Warranty –** Protect your investment. Extend your Warranty nine months for a total of 12 months from the original date of purchase when you register your computer.
- **Express service –** Provides convenient resolution of problems.
- **Free Internet access –** Use the Internet for up to 100 free hours when you sign up with GTE (no credit card necessary). Free access expires 100 hours or 60 days after signing up, whichever occurs first.

If you have not already registered, follow these steps to use your computer's online registration service.

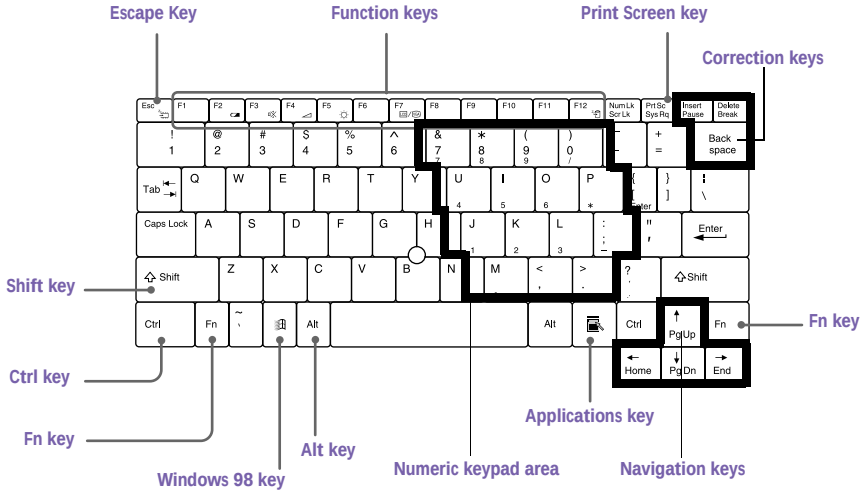
You must connect your phone line before using any online services, including the online registration service. See "Connecting a Phone Line" on page 34.

1. Click the registration icon on the VAIO desktop.
2. Enter the information requested on the first online registration form. Press the Tab key to move from box to box.
3. Click the Next button to advance to the next form.
4. Complete the remaining forms by clicking the Next button each time you complete a form.

The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.

Using the Keyboard

Your keyboard is very similar to a typewriter's, but the keyboard has additional keys that perform specific computer-related tasks.



Key	Description
Numeric keypad area	Contains the keys found on a typical calculator. Use the numeric keypad area to type numbers or to perform mathematical calculations such as addition and subtraction. Numbers appear on the front beveled edge of the numeric keys. Note that you must press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock light will be on.)
Navigation keys	Several keys are devoted to moving the cursor on the screen (the four arrow keys which also function as the Home, End, Page Up, and Page Down keys).
Correction keys	The Insert, Backspace, and Delete keys enable you to make corrections in your documents.
Function keys	The twelve function keys along the top of the keyboard are used to perform designated tasks. For example, in many applications, F1 is the Help key. The task associated with each function key may vary from one application to the next.

Key	Description
Escape key	The Esc (Escape) key is used to cancel commands.
Print Screen key	The Print Screen key takes an electronic snapshot of the screen and places it in the Windows Clipboard. You can then paste the screen shot into a document and print it.
Operator keys	Several keys are always used with at least one other key: Ctrl, Alt, and Shift. When held down with another key, the Ctrl (Control) and Alt (Alternate) keys offer another way to give commands. For example, in many applications, instead of choosing the Save command from a menu, you can hold down Ctrl and press S (referred to as Ctrl+S). The Shift key operates the same way as on a typewriter; it's used to produce capital letters or special symbols such as @ and $.
Windows 98 key	The key with the Windows logo displays the Windows 98 Start menu; it's the equivalent of clicking the Start button on the task bar. See "Combinations and Functions with the Windows 98 Key" on page 18.
Fn key	The Fn key is used in combination with other keys to issue commands. The Fn keys at the left and right sides both work the same. See "Combinations and Functions with the Fn Key" on page 20.
Applications key	The Applications key displays a shortcut menu of context-sensitive choices; pressing this key is the equivalent of clicking the right mouse button.

Combinations and Functions with the Windows 98 Key

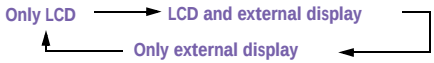
Combination	Function
+ F1	Displays Windows Help.
+ Tab	Switches the selected button on the taskbar.
+ E	Displays Windows Explorer.
+ F	Displays the Windows Find: All Files window to find a file or folder. This is the equivalent of selecting Find and then Files or Folders from the Start menu.
+ Ctrl + F	Displays the Windows Find: Computer window where you can locate other computers. This is the equivalent of selecting Find and then Computer from the Start menu.
+ M	Minimizes all displayed windows.
Shift + + M	Returns all minimized windows to their previous size.
+ R	Displays the Run window. This is the equivalent of selecting Run from the Start menu.
Fn + + Insert	Displays the Properties window. This is the equivalent of double-clicking the System icon in the Control Panel.

Indicators

Indicator	Function
Information	Turns on when the PPK Timer is set. Turns off when the PPK Timer is not set or the PPK Timer setting is inactive. (Such as when the computer's power is off or in System Hibernation mode.)
Battery	Indicates the status of the battery attached at the rear of the computer.
Power	Lights when the power to the computer is turned on. Flashes in System Suspend mode. Turns off when the computer is in System Hibernation mode or powered off.

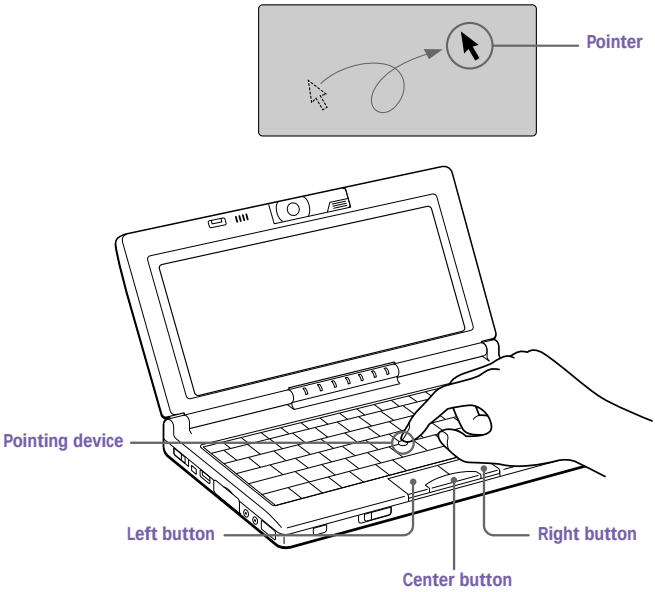
Light	On	Off
Hard disk	Data is being read from or written to the hard drive. Do not enter System Suspend mode or turn off the computer when this indicator light is on.	The hard drive is not being accessed.
Num Lock	The number keys area in the numeric keypad are active.	The alphanumeric character keys in the keypad area are active.
Caps Lock	The letters appear in uppercase as you type. The Shift key lowers the case of typed letters when Caps Lock is on.	Letters appear in lower case as you type (unless you hold down the Shift key).
Scroll Lock	The screen scrolls differently. (Exactly how it scrolls depends on the specific application. It has no effect in many applications.)	Information moves across the display normally.

Combinations and Functions with the Fn Key

Combinations/ Feature	Functions
Fn+ (ESC) System Suspend	Puts the system into System Suspend mode, a power management state. To return the system to the active state, press any key or press the power switch on your computer.
Fn+ (F2) Display power status	Displays the power status, as in the example below:
Fn+ (F3) Speaker switch	Toggles the built-in speaker off and on.
Fn+ (F4) Speaker volume	Adjusts the built-in speaker volume. To increase volume, press Fn+F4, then ↑ or →. To decrease volume, press Fn+F4, then ↓ or ←.
Fn+ (F5) Brightness control	Adjusts the brightness of the LCD. To increase light intensity, press Fn+F5 and then ↑ or →. To decrease light intensity, press Fn+F5 and then ↓ or ←.
Fn+ (F7) Switch to the external display	Toggles through the LCD, external display (connected to the Monitor connector), and both LCD and external display. 
Fn+ (F12) System Hibernation	Provides for the lowest level of power consumption. When you execute this command, the state of the system and state of the peripheral devices are written to the hard disk and the system power is turned off. To return the system to the original state, use the power switch to turn on power.
Fn+D Video standby	Turns off the LCD in order to save power.

Using the Pointing Device

The pointing device on the keyboard allows you to point to, select, drag, and scroll objects on the screen.

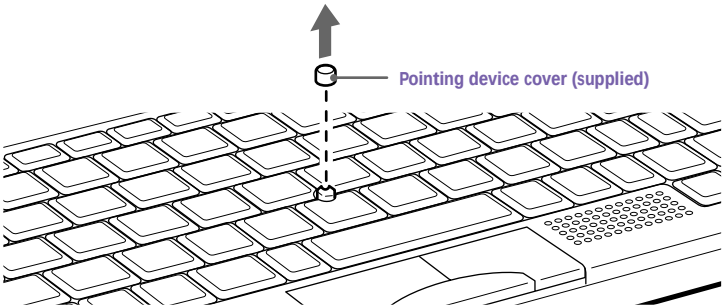


Action	Description
Point	Press the pointing device in a direction to place the pointer on an item or object.
Click	Press the left button once.
Double-click	Press the left button twice.
Right-click	Press the right button once. In many applications, this action displays a shortcut menu of context-sensitive choices.
Drag	Press the pointing device in a direction to place the pointer on an item or object. While holding the left button, press the pointing device, then release it at the desired point.
Scroll	Press the pointing device while pressing the center button.

The scroll function is available only with applications that support a scroll pointing device feature.

To replace the pointing device cover

You can take off the pointing device cover and replace it with the additional pointing device cover supplied with your computer.

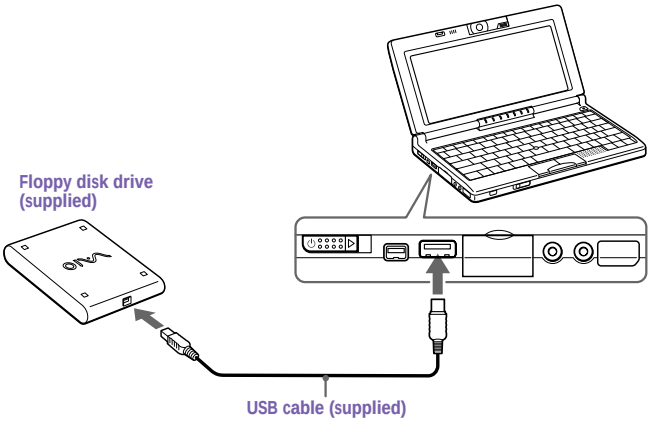


Using the Floppy Disk Drive

You can connect the floppy disk drive to the USB connector on your computer.

To connect the floppy disk drive

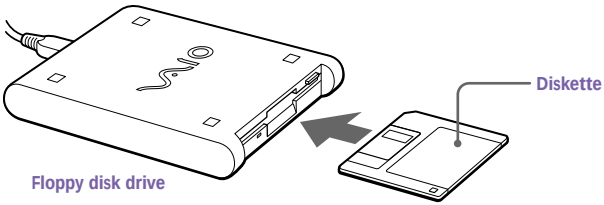
Plug one end of the USB cable into the USB connector on the computer and the other end into the USB connector on the floppy disk drive. When using the disk drive, the VAIO logo should face up.



To insert a diskette

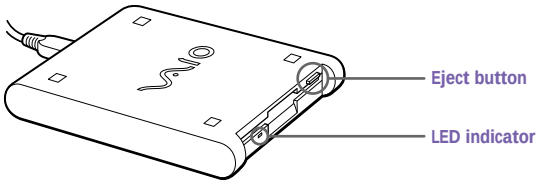
1 Hold the diskette with the label side facing up.

2 Gently push the diskette into the drive until it clicks into place.



To remove a diskette

- When you finish using a diskette, wait until the LED indicator turns off and then press the Eject button to remove the diskette.



Using PC Cards

Your computer includes a PC card slot. PC cards allow you to connect portable external devices, such as a CD-ROM drive, or to connect to a network.

The PC card slot can accommodate one Type II PC card. This slot is compatible with Card Bus and ZV (Zoomed Video) port.

Some PC cards may require that you disable idle devices when using the PC card. You can use Sony Notebook Setup to disable devices. See "Displaying the Sony Notebook Setup Screen" on page 43 for details.

Be sure to use the most recent software driver provided by the PC card manufacturer.

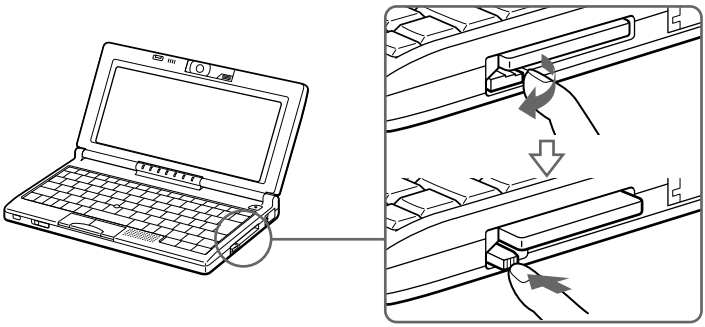
If an "!" mark appears on the Device Manager tab in the System Properties dialog, remove the software driver and then reinstall it.

You may not be able to use some PC cards or some of the functions of a PC card with this computer.

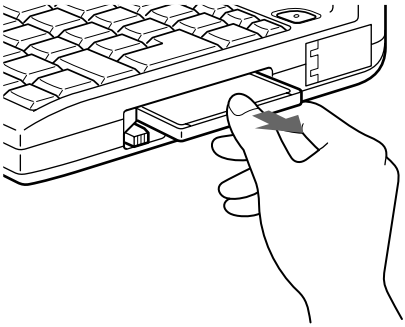
To insert a PC card

You do not need to shut down the computer before inserting or removing a PC card.

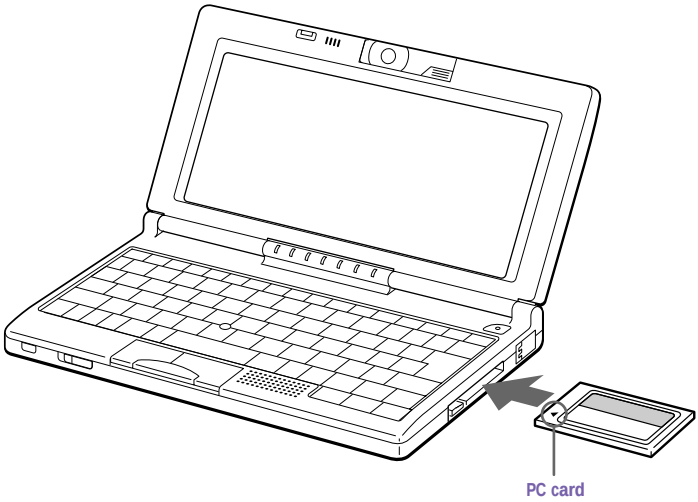
1 Pull the PC card release button up away from the computer and push it in towards the computer.



2 Remove the PC card slot protector.



3 Insert the PC card into the PC card slot, front label facing up. Gently push the card into the slot until the card is fixed into the connector. The release button comes out.



Do not force a card into the slot. It may damage the connector pins.

If you have difficulty inserting a card, check that you are inserting the card with the correct orientation.

See the manual that came with your PC card for more information on its use.

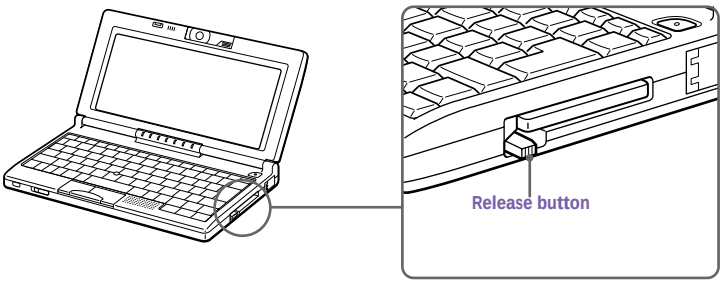
For some PC cards, if you alternate between normal power operation and the system suspend or system hibernation power management modes while the card is inserted, you may find that a device connected to your system is not recognized. Reboot your system to correct the problem.

To remove a PC card

1 Close any applications that use the PC card. Otherwise data may be lost.

2 Click the PC card icon in the taskbar and close the card.

3 Pull the PC card release button up and press it in towards the computer.



4 Gently grasp the card and pull it out.

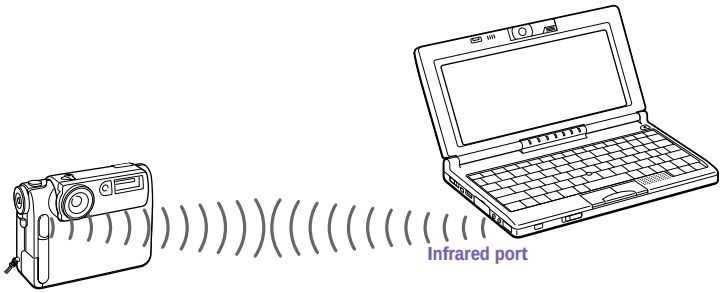
5 Insert the PC card slot protector into the empty slot.

Using Infrared Communication Devices

Your computer includes an infrared port, located on the left side of the computer. You can use this port to communicate with other infrared-equipped devices with compatible protocols, such as a digital still camera or other computers.

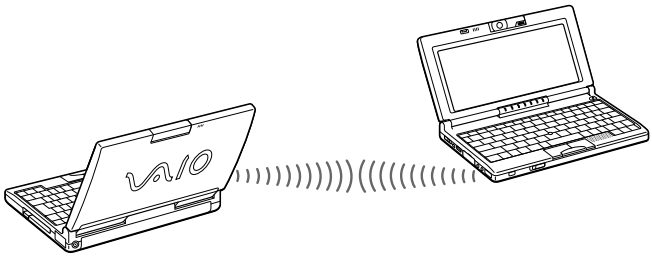
To use infrared communication with a digital still camera

Align the infrared ports on the computer and the digital camera so that they are in a direct line.



To use infrared communication with another computer

Align the infrared ports on the two computers so that they are in a direct line.



Infrared communication capability can be turned on and off. By default, it is not enabled when your system is shipped. To enable infrared use, click the Infrared icon in the Windows Control Panel, and select the Enable infrared communication checkbox on the Options tab.

You can disable infrared communication when you are not using it to conserve battery life.

Use the Infrared icon in the Windows Control Panel to enable and disable infrared communication. Do not use the icon in the taskbar.

When you transfer files directly from devices other than the internal hard disk drive, such as a CD-ROM drive or hard disk drive on a network, set the System Suspend and System Hibernation timers to off.

Check the Status tag of the Infrared Monitor in the Windows Control Panel to determine if the infrared device is detected.

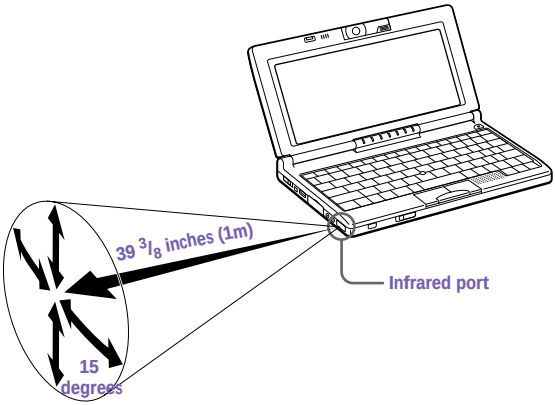
If the two devices are too far apart or too close together, data transfer may be interrupted or there may be noise in the transmission.

Do not cover the infrared ports with your hand or any other objects.

Avoid direct sunlight, fluorescent light, or flashing incandescent light near the infrared ports.

See the manual that came with your digital still camera or other infrared communication device for more information on installation and use.

The active area of infrared transmission extends about 39 $^{3}/_{8}$ inches (1m) with a radius of 15 degrees.



Using Power Saving Modes

When you use a battery as the source of power for your computer, you can take advantage of power management settings to conserve battery life. In addition to the normal operating mode, which allows you to turn off specific devices, your computer has two distinct power saving modes: System Suspend and System Hibernation. When using battery power, you should be aware that the computer automatically enters System Hibernation mode when the remaining battery charge drops below 7%, regardless of the power management setting you select.

If your battery level falls to less than 10%, you should either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.

Normal Mode

This is the normal state of your computer when it is in use. The green power indicator light is on in this mode. To save power, you can turn off a specific device such as the LCD or the hard disk.

For details, see "Controlling Power Management" on page 45.

System Suspend Mode

The computer saves the current state of the system in RAM and switches off power to the CPU. The amber power indicator light flashes in this mode.

To activate System Suspend mode

Press Fn+Esc, or you can slide the power switch forward and release the switch immediately. You can also use the PowerPanel utility to enter System Suspend mode.

To return to normal mode

Press any key.

System Hibernation Mode

The state of the system is saved on the hard drive and power is turned off. The power indicator light is off in this mode.

To activate System Hibernation mode

Press Fn+F12. You can also use the PowerPanel utility to enter System Hibernation mode.

To return to normal mode

Turn on the computer by sliding the power switch forward. The computer returns to its previous state.

When returning from System Hibernation mode, the system status stored on the hard disk is erased and the computer starts normally if you slide the power switch forward and hold for more than four seconds.

- Time to return to normal mode:

  System Suspend requires less time than System Hibernation.

- Power consumption:

  System Suspend uses more power than System Hibernation.

Connecting Peripheral Devices

You can add functionality to your computer by connecting any of these peripherals:

- Phone line (page 34)
- Printer (page 35)
- External display (page 36)
- External mouse (page 38)
- CD-ROM drive (page 39)
- Digital video camera recorder (page 42)

Before you connect peripherals, turn off the computer and all peripherals.

Connect the AC adapter only after connecting all cables.

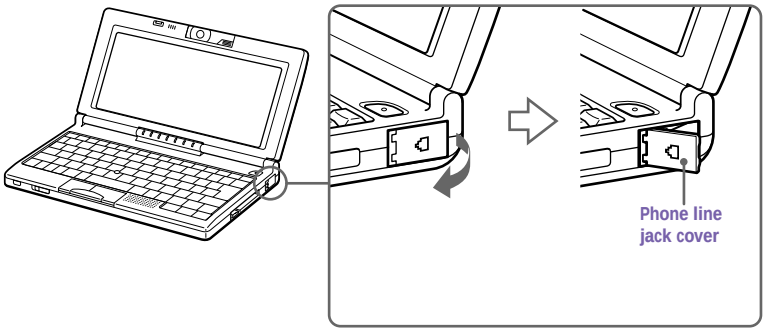
Turn on the computer only after turning on all peripherals.

Connecting a Phone Line

You need to connect a phone line to take advantage of online services and the Internet.

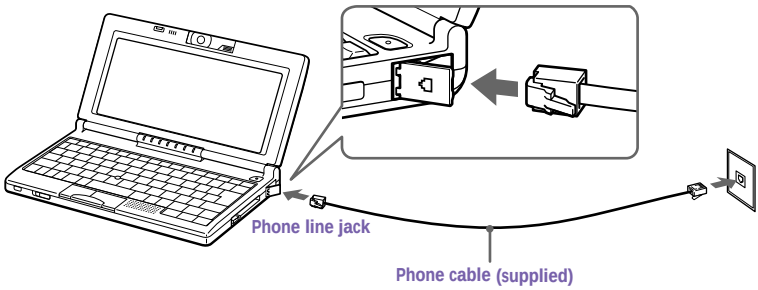
In order to register your VAIO C1 PictureBook Computer or register your software online, you must connect to a phone line. You must register your computer to receive the extended warranty.

1 Open the phone line jack cover. The cover opens only to a 45 degree angle.



2 Plug one end of the phone cable into the jack on the inside of the phone line jack cover. Make sure you insert the phone cable from the rear of the computer and that the modular jack clicks into place.

3 Plug the other end into the wall jack.



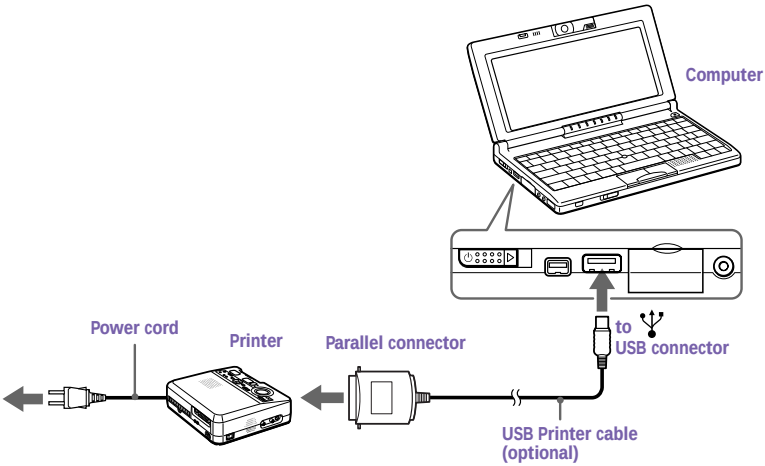
Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX). Some of these connections might result in excess electrical current and could cause a malfunction in the internal modem.

Connecting a Printer

You can connect a Windows 98-compatible printer or other parallel port device to your computer.

To connect a printer

Plug the USB printer cable (optional) into the USB connector.



See the manual that came with your printer for more information on installation and use.

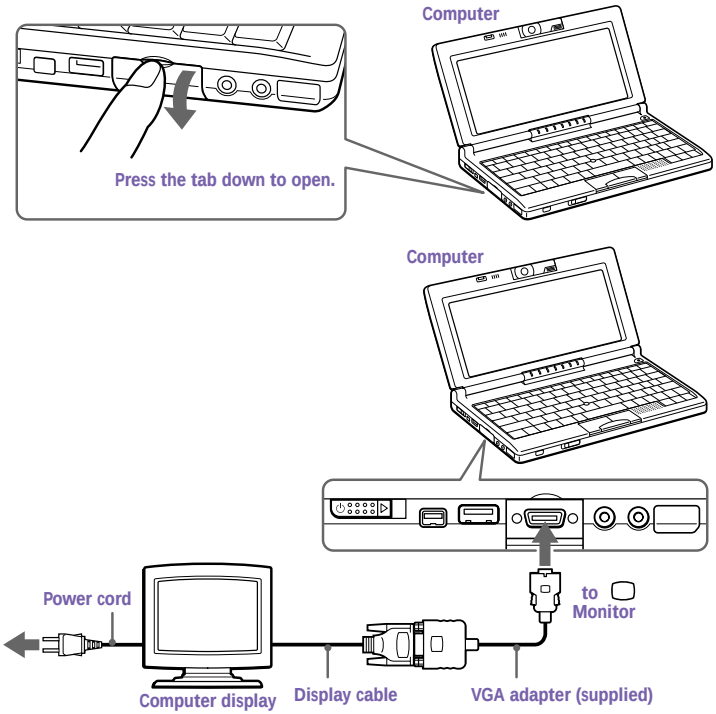
Connecting an External Display

You can connect an external display to your VAIO C1 PictureBook Computer. For example, you can use the computer with either of the following:

- Computer display (monitor) (page 36)
- Projector (page 37)

To connect a computer display

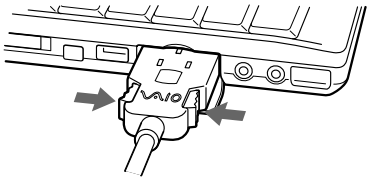
- Use the 🖵 symbol to locate the Monitor connector. Connect the supplied adapter to the Monitor connector, then plug the display cable into the adapter.
- If necessary, plug one end of the display power cord into the display, and the other end into an AC outlet.
- Before connecting an external display, open the external display connector cover on the left side.



See the manual that came with your computer display for more information on installation and use.

To remove the VGA adapter

Turn off your computer and then press both sides of the connector of the VGA adapter.

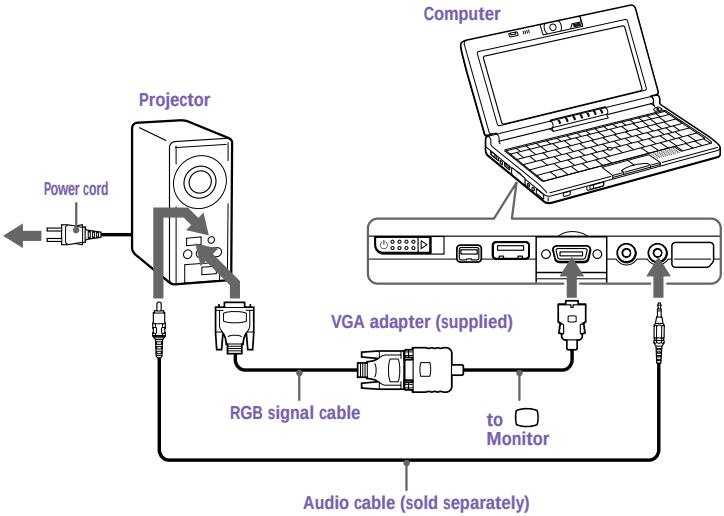


To connect a projector

You can use a projector as an external display, such as the Sony LCD Projector.

1 Use the ▭ symbol to locate the Monitor connector. Plug the RGB signal cable to a VGA adapter and into this connector.

2 Use the ∩ symbol to locate the Headphone connector. Plug the audio cable into this connector.



✍ See the manual that came with your projector for more information on installation and use.

To select a display

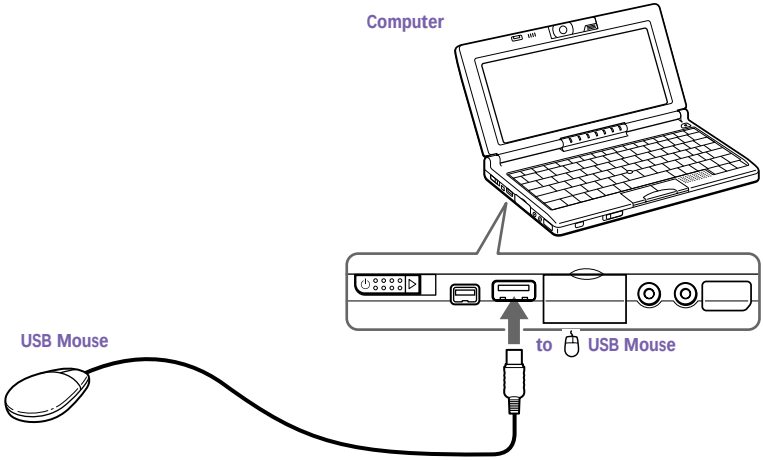
When you connect an external display to the monitor connector, you can press Fn+F7 to toggle the output between the Liquid Crystal Display (LCD), the external monitor, or both devices. See “Selecting the Display Mode” on page 52 for more information.

Connecting an External USB Mouse

You can connect an external USB mouse PCGA-UMS1 (optional) to your computer.

To connect an external mouse

Plug the mouse cable into the USB connector.



See the manual that came with your mouse for more information on installation and use.

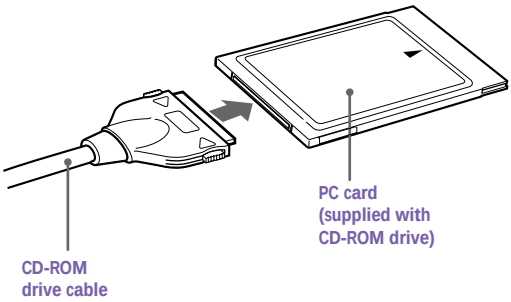
Connecting the CD-ROM Drive

You can use the optional PCGA-CD5 CD-ROM drive with your computer.

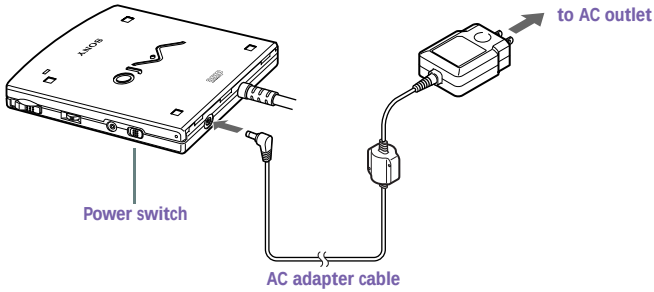
To connect the CD-ROM drive

1 Remove the PC card slot protector from the PC card slot. See "Using PC Cards" on page 25 for details.

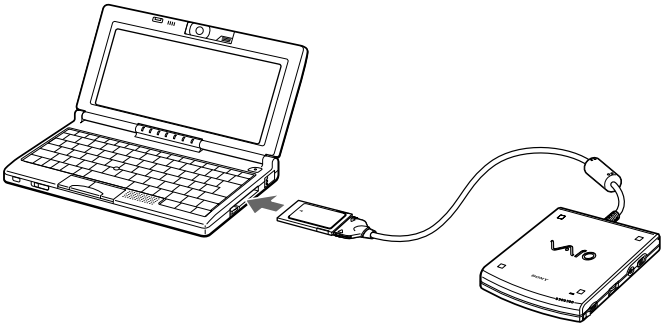
2 Connect the CD-ROM drive cable to the PC card supplied with the CD-ROM drive.



3 Connect the CD-ROM drive AC power adapter to the CD-ROM drive and plug the AC adapter into an AC outlet. Turn on the computer by sliding the power button forward.



4 Insert the PC card into the PC card slot with the label side facing up. See “Using PC Cards” on page 25 for details.

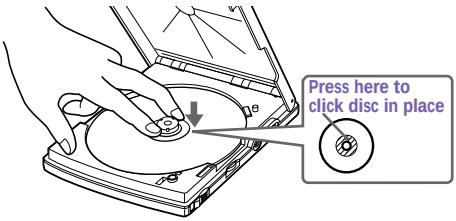


The pick-up cover is attached to the lens of the CD-ROM drive at the factory. Before using the CD-ROM drive, remove the pick-up cover.

To insert a CD-ROM

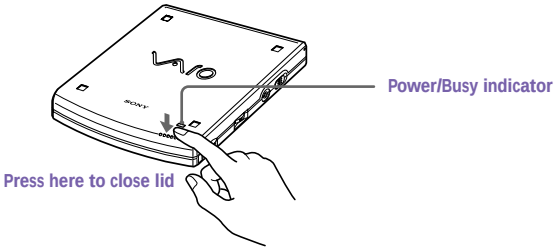
1 Slide the Open button in the direction of the arrow to open the CD-ROM drive lid.

2 Place the CD-ROM in the tray with the label side facing up. Push the disc onto the hub until the disc clicks into place.



Be sure to seat the CD-ROM firmly over the CD-ROM drive hub fingers. If you do not seat the disc firmly, you could damage your CD-ROM drive and you may not be able to open the CD-ROM drive lid.

3 Gently press on the CD-ROM drive lid until it clicks shut.

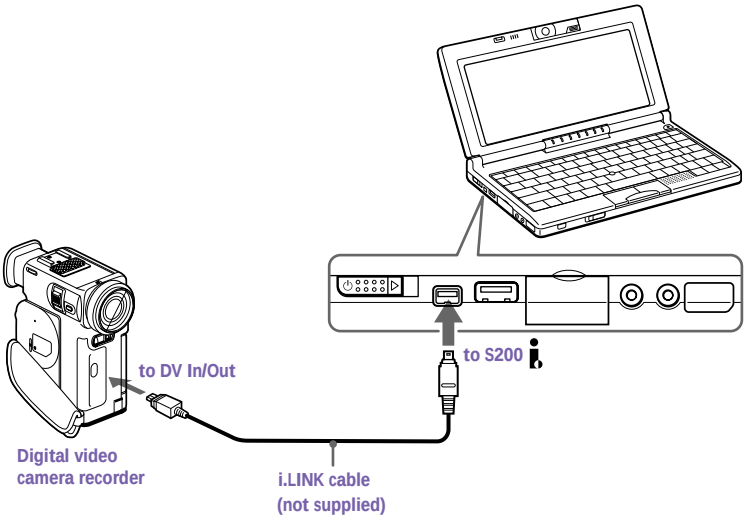


Connecting a Digital Video Camera Recorder

The VAIO C1 PictureBook Computer includes an i.LINK (IEEE 1394) connector, which you can use to connect to a digital video camera recorder.

To connect a digital video camera recorder

- Plug one end of an i.LINK cable into the S200 connector on the left side of the computer and the other end into the DV In / Out connector on the digital video camera recorder.



The Sony digital video camera recorder (DCR-PC7) is pictured; your digital video camera recorder may need to be connected differently.

On Sony digital video cameras, connectors labeled "DV In/Out" or "i.LINK" are compatible.

See the manual that came with your digital video camera recorder for more information on installation and use.

The i.LINK connector does not supply power to external devices. If the external device requires power from the i.LINK connector, you cannot use the device with your computer.

The C1 PictureBook Computer supports transfer rates up to 200 Mbps; however, the actual transfer rate is the lowest transfer rate of the external device.

The i.LINK features available may vary depending on the software applications you use. See the documentation that came with your software for more information.

Customizing Your C1 PictureBook Computer

You can customize the settings of your C1 PictureBook Computer. The following sections briefly describe how to change your computer's default settings. You can also refer to the Sony Notebook Setup Help for more detailed information.

Displaying the Sony Notebook Setup Screen

To display the Sony Notebook Setup screen

1. Click the Start button on the Windows 98 taskbar.
2. Point to VAIO and then click Sony Notebook Setup.
3. Select the tab for the item you want to change. See "Notebook Setup Tabs" on page 44.
4. After you finish, click OK.

Notebook Setup Tabs

Tab	Descriptions
About This Computer	Display system information, including memory capacity, serial number, and BIOS version.
Power On Device Sequence	Select the order of drives and devices from which you want to load the operating system.
Power On Password	Set the password to secure your computer.
Enable Ports	To change the audio and modem settings, click Advanced on the Basic / Advanced tab.
Basic / Advanced	Toggle between Advanced mode (additional screens with advanced settings) and Basic mode of display. Advanced mode includes Audio, Built-in Modem, Infrared, Enable Ports, and View Resources tabs.

For more information about each option, click Help on the Sony Notebook Setup screen to display the help file.

Controlling Power Management

The PowerPanel utility allows you to control the power management of your computer and provides key information about system activity and battery life. The following sections briefly describe how to conserve your computer's battery power. You can also refer to the PowerPanel Help for more detailed information.

Power Management Profiles

PowerPanel provides several predefined power management profiles. Each profile consists of a group of specific power management settings that are designed to meet specific power management goals — ranging from maximum power management to no power management. You can change the settings for any of the predefined profiles or you can create your own profile to suit your portable computing needs. The predefined profiles are:

Icon	Description
	Maximum Battery Life – Provides power-saving features to give you maximum battery life and good performance. It slows the computer and puts it into System Suspend mode after a specified period of inactivity.
	Power Management Off – Turns off all power management features such as System Suspend and System Hibernation modes.
	AC Profile – The power management state when AC power is in use. Similar to the Power Management Off setting. PowerPanel automatically loads the AC profile unless you disable this feature.
	Presentation – Keeps the display on at all times while it conserves power. This option is ideal for slide show presentations. You can establish settings for LCD (Video) Standby, Hard Disk Sleep, and System Suspend to optimize power management for your system.
	Camera - Provides the best system performance while using the built-in camera.
	Word Processing – Optimizes power management with longer timeouts on the hard disk and display screen. You can also establish settings for LCD (Video) Standby, Hard Disk Sleep, and System Suspend to optimize power management for your system.

Icon	Description
	Communications – Extends battery life by initiating a quick display timeout. The Internal modem remains powered. You can also establish settings for LCD (Video) Standby, Hard Disk Sleep, and System Suspend to optimize power management for your system.

Power Management Commands

PowerPanel also provides power management commands that you can use to activate specific power management functions and to control power for a specific device. You might use these commands when you want to override a profile setting or initiate an immediate action, such as putting the system into Video Standby mode before the Video Standby timer expires.

Icon	Description
	System Suspend – Puts the system into System Suspend mode, a power management state that saves the state of the system and peripheral devices in memory (RAM). Power consumption reduces to a minimum, and the system remains on. To return the system to the active state, press any key or the power switch on your computer.
	System Hibernation – Provides for the lowest level of power consumption. The system writes the state of the system and peripheral devices to the hard disk and turns off the system power. To return the system to the original state, use the power switch to turn on power. The system saves the data in the Save to Disk Partition on the hard drive.
	LCD (Video) Standby – Turns off the LCD to save power. If you turn off the Video Standby timer, the display remains active except when the system enters System Suspend mode. The video display system is one of the largest consumers of power in the system.
	Hard Disk Sleep – Turns off the hard disk spindle motor. Although you can manually turn off the power to the hard disk through this command, any system request to the hard disk turns on the power to the hard disk.
	Speed Controller - Controls the speed at which the CPU performs. Click this button to open the Speed Control dialog box. When you select the Auto checkbox, the CPU performs at full speed while the system is active and at 25% of full speed during periods of inactivity. Auto is the recommended option. You can also choose to run the CPU at 100%, 75%, 50%, or 25% of full speed regardless of whether the system is active or inactive. Using this command can help conserve battery power.

Icon	Description
	PC Card– Controls the PC card sockets. Click this button to open the PC Card (PCMCIA) Properties dialog box. You can view the properties for the PC cards.

To activate PowerPanel

1 Double-click the (PowerPanel) icon on the taskbar.

The Profiles toolbar appears. When you move the pointer over the atom icon on the taskbar, a tooltip with the name of the active power management profile appears.

2 Click the button you want to set.

The power management settings associated with the profile you select become active.

To display the Commands toolbar, right-click an empty portion of the toolbar and select Commands from the shortcut menu. Refer to the PowerPanel Help for information on customizing the PowerPanel toolbars.

When you use the battery pack to power your computer, your system selects the Maximum Battery Life power management profile by default. If you select a different power management profile while using battery power, that profile is selected automatically the next time you use the battery pack to power your computer.

Displaying Battery Information

You can display detailed information for the battery in your computer. The following sections briefly describe how to display your computer's general battery information. You can also refer to the BatteryScope Help for more detailed information.

Activating BatteryScope

To activate BatteryScope

1. Click the Start button on the Windows 98 taskbar.
2. Point to VAIO and then click BatteryScope.

   When you move the pointer over the battery icon on the taskbar, a tooltip appears indicating the total capacity remaining in the battery and the estimated time until the battery fully discharges.

   You can also view battery gauges on the shared PowerPanel and BatteryScope toolbar.

- **Percentage indicator**

  Displays the percentage of the remaining capacity.

- **Time indicator**

  Displays estimated time (hours / minutes) remaining before the battery fully drains, also referred to as the time-to-empty.

Battery Icon Descriptions

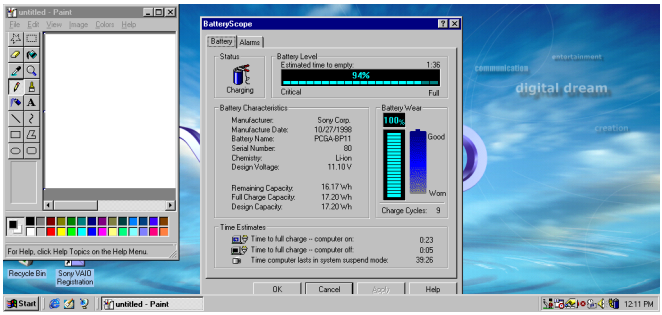
Battery icon	Battery status
	Discharging
	Charging
	No battery

Displaying Detailed Battery Information

You can obtain detailed information about the batteries.

- Double-click the battery icon on the toolbar to display the BatteryScope window.

  The screen appears displaying the Battery tab, which contains information such as the estimated time-to-empty and charging time.

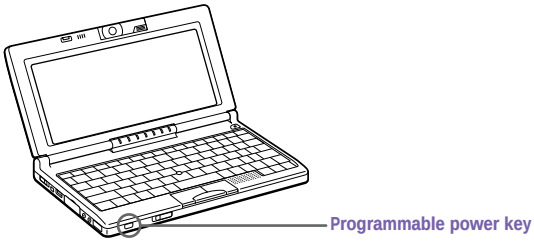


To customize the BatteryScope toolbar and alarm system

You can customize the BatteryScope toolbar to suit your portable computing needs, including modifications to the alarm settings. Refer to the BatteryScope Help for more information.

Starting Your Favorite Software with Programmable Power Key (PPK) Setup

The PPK Setup software enables you to start your favorite software by simply pressing the programmable power key.



This section briefly describes how to use the programmable power key. You can also refer to the PPK Setup Help for more detailed information.

To use the PPK Setup screen

1. Double-click the PPK Setup icon on the taskbar. The PPK Setup screen appears.
2. Select the software title you want PPK to launch automatically from the Registered Files list and right-click. The Setup options screen appears.
3. Click Set as PPK launch file. The appears next to the selected software title.
4. Click OK.

The default settings for PPK do not allow you to start the selected software when the computer's LCD is closed. To start the selected software while the LCD is closed, click the Enable/Disable tab and select Enable PPK even if the LCD Panel is closed. Be aware, however, that the software can now start accidentally if you press the programmable power key when you carry the computer.

Using the Programmable Power Key with Other Keys

You can also choose to start other applications by pressing the programmable power key in combination with the Alt, Ctrl, or Shift keys.

To select the key combination, right-click the application you want to start and select an item from the menu. When you select Set as PPK launch file, you can turn on the power and start the selected application by just pressing the programmable power key. When you select Set as Alt+PPK launch file, Set as Ctrl+PPK launch file, or Set as Shift+PPK launch file, you need to turn on the computer to use these functions.

Using the internal timer

You can use the internal timer to start software at a specific time. You can use this feature when the computer is on or in System Suspend mode.

If the computer's LCD is closed, you cannot use the internal timer to start software using the default settings. To start software while the LCD is closed, click the Enable/Disable tab and select the checkbox next to Enable Timer launch even if the LCD Panel is closed. It may take some time to actually start the software. It is advised that you confirm the time your selected software takes to start.

When selecting software that uses a phone line, the computer may not be able to disconnect the phone line due to communication and server conditions. Be sure to monitor the status of the software when running PPK Setup, and manually disconnect the phone line if you notice a malfunction. Furthermore, when using the timer to start the software, it is advised that you set the computer to enter System Suspend or System Hibernation mode after a certain time. This allows the computer to disconnect the phone line if the computer fails to disconnect the line normally. However, the computer cannot disconnect the phone line when it enters System Suspend mode unless the internal modem ring resume is set to On.

Selecting the Display Mode

When you connect an external display, you can toggle the display mode between the LCD on your computer and an external display.

1. Click the Start button on the Windows 98 taskbar.
2. Point to Settings and click Control Panel.
3. Click Display.
4. Click the Settings tab.
5. Click the Advanced button.
6. Click the NeoMagic® tab.
7. Deselect the LCD checkbox.
8. Assure the CRT / Projector checkbox is selected.
9. Check Apply.

Display mode	Function
Monitor / LCD	Displays simultaneously both the LCD and an external display connected to the Monitor.

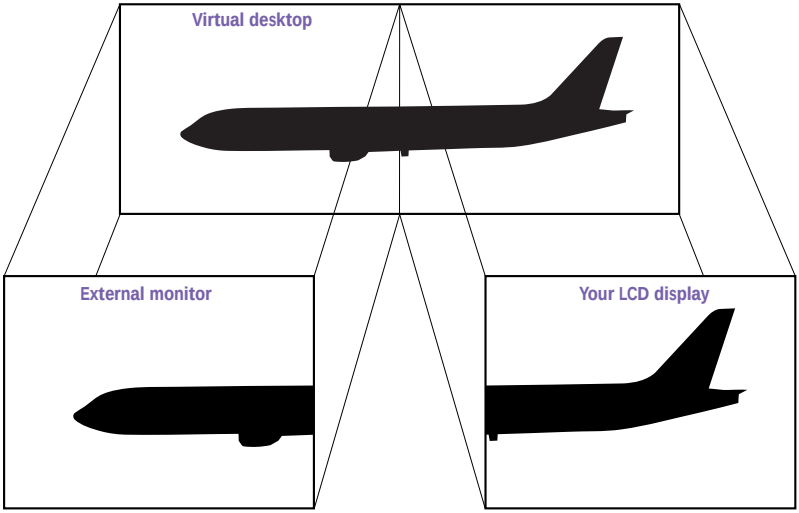
You can adjust the refresh rate when you select Monitor as the display mode.

Some displays do not support using both the computer's LCD and an external display simultaneously.

To use the Monitor and Monitor/LCD display modes, an external display must be connected to the monitor connector on the port replicator.

Using the Dual Display Function

The dual display function allows you to distribute portions of your desktop across separate displays. For example, if you have an external monitor attached to the monitor connector, your LCD display and the monitor can function as a single desktop. You can move the cursor off one display and onto the other. This allows you to drag objects, such as an open application window or a toolbar, from one display to the other. This configuration of a single desktop distributed across separate displays is referred to as a virtual desktop.



Selecting dual display mode

You must restart Windows to use dual display mode. Save your work and close any open applications before changing to dual display mode, then follow these steps:

1. Click the Start button on the Windows 98 taskbar.
2. Point to Settings and click Control Panel.
3. Click the Display icon.
4. Click the Settings tab.
5. Click the Advanced button.
6. Click the NeoMagic tab.

7 Check the Set Dual-Display option and click OK. The System Settings Change dialog box appears.

8 Click Yest to restart your system.

9 Repeat steps 1 to 3 to display the Display Properties.

10 Click the display icon number 2.

11 Click Yes.

12 Click OK.

Setting the colors and resolution for each display

You can set the display colors and resolution for each display that is part of a virtual desktop.

Follow steps 1 to 4 above to display the Display Properties screen. Select the display you wish to change (1 or 2) by clicking on the icon of the display. You can change colors by selecting an option from the Colors list. Use the slider in the Screen area to change the resolution. Click OK or Apply. Click OK to confirm that you want to make the changes.

Customizing the virtual desktop

You can customize dual display mode by changing the position of the two desktops that comprise the virtual desktop.

In the Display Properties screen, drag the icons of display 1 or display 2, moving them to a new position relative to each other. The two display icons must be connected to create a virtual desktop. Click OK to apply the change.

Releasing the dual display setting

You must restart Windows to return to single display mode. Save your work and close any open applications before returning to single display mode. Follow the steps in the section above on Selecting dual display mode. In step 7, remove the check from the Set Dual-Display option. You must restart Windows before the change takes effect.

Changing the Pointing Device settings

Using the Press-select function

You can depress the pointing device to indicate click or right-click, instead of using the left or right button.

1 Click the Start button on the Windows 98 taskbar.

2 Point to Settings and click Control Panel.

3 Double-click Stick.

4 Click the tab Press-select.

5 Check the box Use Press-select.

6 Click OK.

Adjusting the pointing device sensitivity

1 Click the Start button on the Windows 98 taskbar.

2 Point to Settings and click Control Panel.

3 Double-click Stick.

4 Click the tab Sensitivity.

5 Adjust the pointing device sensitivity.

6 Click OK.

Using the scroll/zoom function

1 Click the Start button on the Windows 98 taskbar.

2 Point to Settings and click Control Panel.

3 Double-click Stick.

4 Click the tab Scroll.

5 Check Scroll or Zoom, or Not used.

6 Click OK.

- Scroll: You can scroll by moving the pointing device while holding down the center button, without using the scroll bar.
- Zoom: To drag the zoomed picture, move the pointing device while holding down the center button.
- Zoom: To change the zoom percentage, click while holding down the center button.
- Zoom: To change the zoom size, right-click while holding down the center button.
- Not used: Check when neither of the functions is used.

Using the Smart Utilities

Using Smart Capture

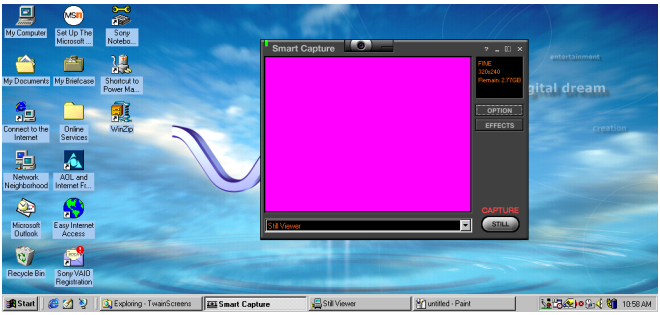
Your computer includes an integrated digital camera. You can use the camera to capture still images and record video clips.

Do not touch the camera lens.

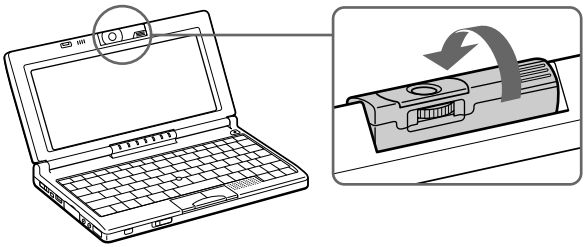
Do not point the camera at the sun.

Capturing a still image

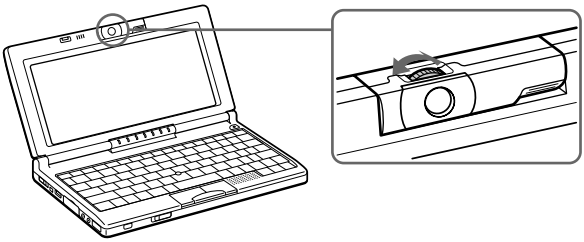
1. Click the Start button on the Windows 98 taskbar.
2. Point to VAIO, then click Smart Capture. The Smart Capture window appears. You can also launch Smart Capture by pressing the CAPTURE button in the upper right corner of the keyboard.



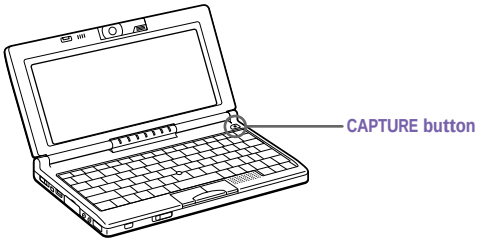
3 Turn the lens toward the subject.



4 Adjust the focus using the focus ring.



5 Press the CAPTURE button halfway down. The image freezes for a moment. To select a different image to capture, release the CAPTURE button and press it again.



6 Depress the CAPTURE button fully. The still image appears in the still viewer window.

When the lens is pointed towards you, Smart Capture is in mirror mode. In mirror mode, you can take a picture of yourself. A mirror-image appears in the Smart Capture window of the display while you are viewing. The captured image, however, will not be reversed.

See the Smart Capture online help for more information on use.

You can capture still images in the following resolutions: 640 x 480, 320 x 240, 160 x 120, 80 x 60, and 40 x 30.

The viewing image and the captured image may differ when you capture a still image of resolution 640 x 480.

Images of resolutions 640 x 480 or 40 x 30 may appear grainy.

A gap may appear when an object in rapid movement is viewed. This is not a malfunction.

To exit Smart Capture

❑ Click the ✕ (Close) button.

To close Still Viewer

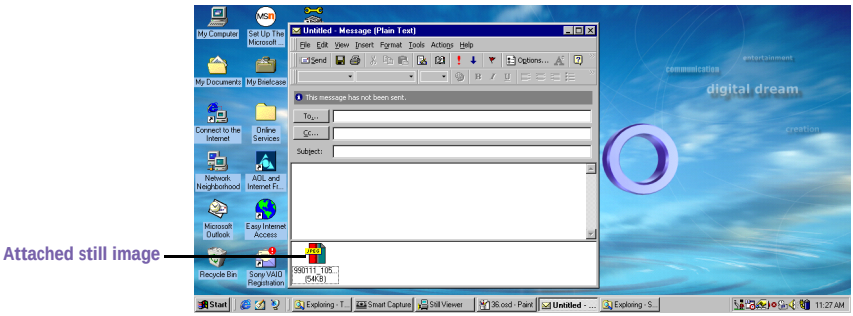
❑ Click the ✕ (Close) button.

You can capture still images using i.LINK compatible devices and DVgate Still software. Refer to “Connecting a Digital Video Camera Recorder” on page 42 for information on connecting the device. You should also refer to the DVgate Still help file.

You can create a panorama view using the panorama assist function in Smart Capture. See the online help for more information.

To send a still image via e-mail using a MAPI-compliant e-mail software such as Microsoft® Outlook® 98

1. Make sure your e-mail software is compatible with the Messaging Application Programming Interface (MAPI). See the manual that came with your e-mail software to determine if it is MAPI compliant.
2. Make sure your e-mail software is set up to send and receive mail.
3. Click the Start button on the Windows 98 taskbar.
4. Point to Programs, point to Smart Capture Application, and then click Still Viewer.
5. Choose the still image you want to send using the ⏮ or ⏭ button. To capture a new still image, press the CAPTURE button in the upper right corner of the keyboard. For details on capturing still images, see “Capturing a still image” on page 57.
6. Click MAIL.



7. Address the e-mail and write your message. The still image is automatically attached as a file.
8. Send the e-mail.

See the manual that came with your e-mail software for more information on sending e-mail.

Note: If you use Microsoft® Outlook® 98 as your e-mail software, check your mail in order to send the messages in your out box.

To send a still image via e-mail if you use America Online® or other non-MAPI-compliant e-mail software

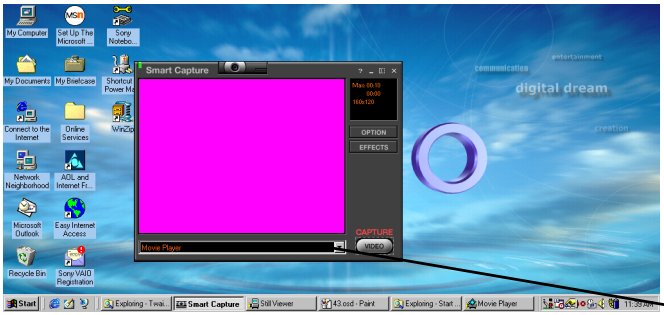
If you use an online service provider such as America Online® or other non-MAPI-compliant e-mail software, you should not use the MAIL button to send still images. You can send still images by attaching the still image file to your e-mail message.

1. In the Smart Capture application, capture a new still image or choose a previously captured image to send. To capture a new still image see "Capturing a still image" on page 57. To choose a previously captured still image, use the ⏮ or ⏭ button.
2. Click the Save button to save the image as a file.
3. Create your e-mail message and attach the file to your message.

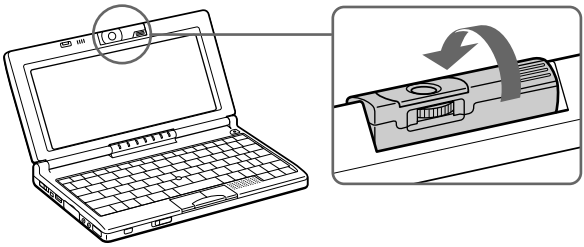
Capturing a video clip

You can capture video clips using the built-in camera, view them, and send them via e-mail.

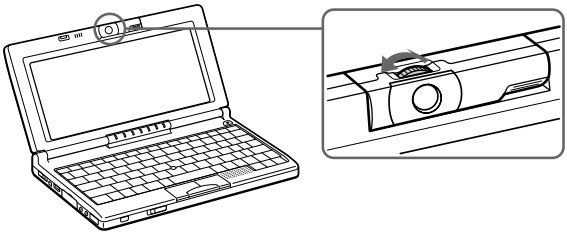
1. Click the Start button on the Windows 98 taskbar.
2. Point to Programs, point to Smart Capture Application, and then click Smart Capture.
3. Click the drop down bar and select Movie Player.



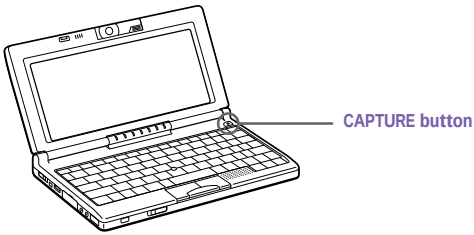
4 Turn the camera lens toward the subject.



5 Adjust the focus using the focus ring.



6 Hold down the CAPTURE button to import the video clip. Video is recorded while the button is depressed. You can import up to 60 seconds of video.



7 Release the CAPTURE button when finished.

The captured video clip appears in the video window.

When the lens is pointed towards you, Smart Capture is in mirror mode. In mirror mode, you can take a picture of yourself. A mirror-image appears in the Smart Capture window of the display while you are viewing. The captured image, however, will not be reversed.

You can capture video images in the following formats:

Non-compressed : Video 160 x 120, 24 bits, maximum 10 frames/sec.
Audio PCM, 11.025kHz, 8 bits, monaural.

Compressed : Video VDOWave SV-512, 160 x 112, 24 bits, maximum 10 frames/sec.
Audio GSM 6.10, 11.025kHz, monaural.

A gap may appear when an object in rapid movement is viewed. This is not a malfunction.

To play back captured video clips

Start the Movie Player software. Click ▶ to play back the images. Click ❚❚ to pause, ■ to stop playback.

To end Smart Capture

❑ Click the ✕ (Close) button.

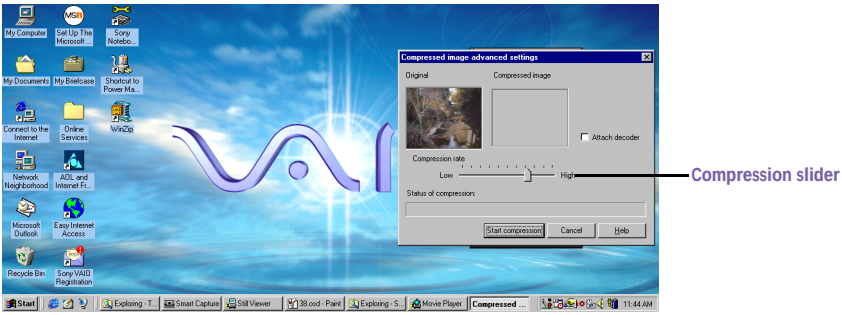
To end Movie Player

❑ Click the ✕ (Close) button.

To send a video clip via e-mail using a MAPI-compliant e-mail software such as Microsoft® Outlook® 98

Note that if this is the first time you are sending a video clip to an individual, you must also attach a VDO Codec to your message as described in step 9 below.

1. Make sure your e-mail software is compatible with MAPI. See the manual that came with your e-mail software to determine if it is MAPI compliant.
2. Make sure your e-mail software is set up to send and receive mail.Click MAIL.
3. Click the Start button on the Windows 98 taskbar.
4. Point to Programs, point to Smart Capture Application, and then click Movie Player.
5. Send the previously recorded video clip that appears in the video image display area or record a new one. To record a new video clip, see “Capturing a video clip” on page 61.
6. Click MAIL.
7. Select the Attach decoder check box the first time you send someone a video clip.
8. Choose the compression rate by dragging the slider to the left or the right. The higher the compression rate, the more the image quality will deteriorate.



Move the slider to the right for high compression or to the left for low compression

9. Click Start compression.
10. Select Yes to confirm the compressed file size.

11 Address your e-mail, compose your message, and then send the e-mail. The video clip is attached as a compressed AVI file (file extension .AVI). The VDO Codec is attached as an executable file (file extension .exe).

12 The recipient of your video clip can execute the VDO Codec by double clicking on the VDODecode30.exe file.

See the manual that came with your e-mail software for more information on sending e-mail.

Note: If you use Microsoft® Outlook® 98 as your e-mail software, check your mail in order to send the messages in your out box.

To send a video clip via e-mail if you use America Online® or other non-MAPI-compliant e-mail software

If you use an online service provider such as America Online® or other non-MAPI-compliant e-mail software, you should not use the MAIL button to send video clips. You can send a video clip by attaching the video clip file to your e-mail message.

1 Record your video clip as described in “Capturing a video clip” on page 61.

2 Click the Save button.

3 Select the destination folder where you wish to save the video clip file.

4 Select Compressed from the drop down list box.

5 Click Save.

6 Choose the compression rate by dragging the slider to the left or the right. The higher the compression rate, the more the image quality will deteriorate.

7 Select the Start compression bar from the Compression Settings dialog box.

8 Select Yes to confirm the compressed file size. The file is saved to your destination folder on your hard drive.

9 Open your e-mail program, address the e-mail, and compose your message.

10 Attach the VDO Codec to your message if this is the first time you have sent this e-mail recipient a video clip. The VDO Codec is located at C:/Program Files/Sony/Smart Capture/Decoder. The file name is VDODecode30.exe.

11 The recipient of your video clip can execute the VDO Codec by double clicking on the VDODecode30.exe file.

Note: For more information about Smart Capture, see the Smart Capture online help.

Using Smart Write

Smart Write allows you to create document memos that include sound and video.

1 Click the Start button on the Windows 98 taskbar.

2 Point to VAIO and then click Smart Write.

3 Type your memo using the keyboard.

To insert an image

1 Click

2 Turn the camera lens toward the subject, and click or press the CAPTURE button.

To record your voice

1 Click

2 Click Record and speak into the microphone.

3 Click Stop when you are finished.

4 Click OK.

To delete the memos, press the Backspace key or the Delete key.

To end Smart Write, select Close from the File menu.

Using Smart Publisher

Smart Publisher allows you to send memos to the Internet.

You must be connected to the Internet before you can send a memo.

1. Click the Start button on the Windows 98 taskbar.
2. Point to VAIO, point to Stationary, and then click Smart Publisher.
3. Click New.
4. Enter information in the profile window and click Next when finished.
5. Enter information in the communication window and click Next when finished.
6. Click OK.
7. Start Smart Write.
8. Click the File menu and point to Internet, then click Send.
9. Choose the profile and click OK.

See the Smart Publisher help file for more information.

Using Smart Label

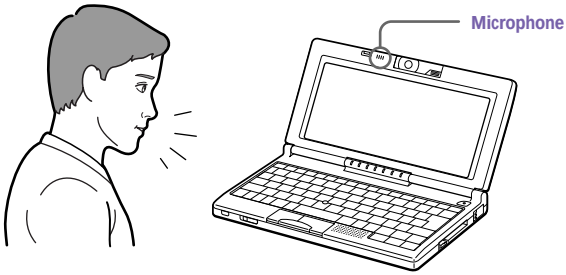
Smart Label allows you to create memos on your desktop that include sound and video.

To create a voice memo

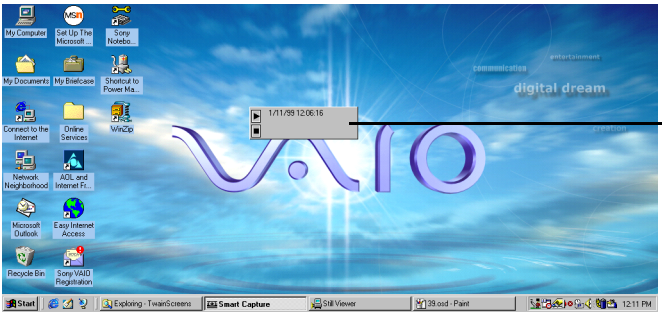
1 Click the Start button on the Windows 98 taskbar.

2 Point to VAIO and then click Smart Label.

3 Double-click on the bottom right corner of the display, and speak into the microphone. The label appears as you record your voice. You can record up to 60 seconds of audio.



4 Click ■ when finished.



See the Smart Label help file for more information.

To play back a voice memo

Click the label, then click ► to play. Click ❚❚ to pause, ■ to stop.

To import images using the camera

1. Right-click at the bottom right corner of the display.
2. Click Use camera.
3. Turn the camera lens toward the subject, and press the CAPTURE button.

A label appears to represent the imported image.

To display the imported image in the original size, right-click the label you want to display. Select Bitmap from the pop-up menu, then select Original size from the submenu.

To delete the memo, right-click the label you want to delete. Click Delete.

To close Smart label, right-click and then click Exit.

Getting Help

Sony provides several support options for your Sony computer. When you have questions about your computer and the preinstalled software, check these sources for answers, in the following sequence:

1	*VAIO C1 PictureBook Computer Read Me First*	Contains a complete list of the items that ship with your computer, product specifications, software support information, and the most up-to-date information on using your computer.
2	*VAIO C1 PictureBook Computer User Guide*	Explains how to use your C1 PictureBook Computer and connect peripheral devices.
3	Online *User Guide*	This electronic document contains additional information on the preinstalled software titles. You can access this guide from the Windows Start menu by selecting Programs/VAIO Documentation.
4	Manuals and online help files that may accompany your preinstalled software	Most of the manuals for preinstalled software are located on your hard disk drive as online help files. You can access the online help files from the Help menu in the specific application. A printed manual is available for some applications.
5	Knowledge Database	Provides instant access to information on commonly encountered problems. Enter a description of your problem and the Knowledge Database searches for the corresponding solutions online. You can access the Sony Knowledge Database at: http://www.sony.com/pcsupport

6	Sony Fax-on-Demand	This service provides you with answers to commonly asked questions. You can use this automated service to request a list of available topics and then select the topics that you want to receive. To contact the Sony fax-on-demand service, call 1-888-4SONYPC (1-888-476-6972). (Requires a fax machine or your fax software.)
7	Calling Sony Customer Support	You can call and speak with a Sony Customer Support Representative without using your computer by calling 1-888-4SONYPC (1-888-476-6972). Software support is available free of charge for 90 days after the original date of purchase.

Troubleshooting

This section describes how to solve common problems you may encounter when using your computer.

When you reconnect devices, be sure to turn off the computer as described in "Shutting Down Your C1 PictureBook Computer" on page 13. Turning off the computer using other methods may result in data loss.

My computer won't start

- Check that the computer is plugged into a power source and that it is turned on. Check that the power indicator on the front panel of the computer indicates that the power is on.
- Check that the battery is inserted properly and that it is charged.
- Make sure there is no diskette in the floppy disk drive.
- Confirm that the AC adapter and all cables are connected firmly, as described in "Connecting Peripheral Devices" on page 33.
- If you plugged the computer into a power strip or UPS, make sure the power strip or UPS is turned on and working.
- If you are using an external display, check that it is plugged into a power source and turned on. Check that the brightness control is adjusted correctly. See the manual that came with your display for details.
- Moisture condensation may have occurred. Do not use the computer for at least one hour and then turn on the computer.

When I turn on my computer, the message "Operating system not found" appears and Windows does not start

- Check the floppy disk drive to see if a non-bootable diskette is in the drive.
- If a non-bootable diskette is in the drive, turn off the computer, remove the diskette, and then turn on the computer again. Confirm that Windows starts properly. If Windows still does not start, follow the procedure below to initialize the BIOS.
- If the floppy disk drive is empty or contains a bootable diskette, use the following procedure to initialize the BIOS:

1. Turn off the computer.
2. Remove the floppy disk drive, PC card, and any other peripheral devices from the computer.
3. Turn the computer on again.
4. Press the F2 key when the Sony logo appears. The BIOS setup menu screen appears.
5. Press the arrow keys to select the Exit menu.
6. Press the arrow keys to select Get Default Values and then press the Enter key. The message “Load default configuration now?” appears.
7. Check that [Yes] is selected, then press the Enter key.
8. Press the arrow keys to select Exit (Save Changes) and then press the Enter key. The message “Save configuration changes and exit now?” appears.
9. Check that [Yes] is selected, then press the Enter key. The computer restarts.

My LCD does not display anything

- Check that the computer is plugged into a power source and that it is turned on. Check that the power indicator on the front panel of the computer is on.
- Check that the battery pack is inserted properly and that it is charged.
- The computer may be in LCD (Video) Standby mode. Press any key to activate the display.
- The video output may be directed to an external display. Press Fn+F7 until video output appears on the LCD.

The screen image on my external display is not centered or sized properly

Use the controls on your external display to adjust the image. See the manual supplied with your display for more information.

The pointer moves across the screen on its own

This is called a “drift” and is not a malfunction. The pointer stabilizes if you do not touch the pointing device for a few seconds.

When I press the pointing device without pressing the left button, it clicks

Check that you have not selected the press-select function. See "Changing the Pointing Device settings" on page 55 for details.

My computer "locks up"

- Try restarting the computer. On the Windows taskbar, click the Start button, click Shut Down, and then click Restart the computer.
- If you cannot restart as described in the preceding step, you can restart the computer by pressing Ctrl+Alt+Delete.
- If the previous step does not work, slide the power switch toward the front and hold it for four seconds. This turns off the power.
- If your computer locks up while playing a CD-ROM, stop the CD-ROM, and restart the computer by pressing Ctrl+Alt+Delete.

Pressing Ctrl+Alt+Delete or turning off the computer with the power switch may result in data loss in files that are currently open.

My software program "locks up" or crashes

Contact the software publisher or designated provider for technical support.

Movements of the displayed images are awkward (not smooth)

In PowerPanel, select Change CPU Speed. Remove the check from Auto, and set Speed Control to 100%. See "Controlling Power Management" on page 45 for details.

I cannot play a CD-ROM

- Make sure the label of the CD-ROM is facing up.
- If the CD-ROM requires software, make sure the software is installed according to the program's instructions.
- Moisture condensation may have occurred. Disconnect the CD-ROM drive and disconnect the power to the drive for at least one hour.
- Make sure the CD-ROM drive is properly connected. See "Connecting the CD-ROM Drive" on page 39.
- Clean the CD-ROM.
- Check the speaker volume.

When I click an application icon a message appears, such as "You must insert the application CD into your CD-ROM drive," and the software does not start

- Some titles require specific files that are located on the application's CD-ROM. Insert the disc and try starting the program again.
- Make sure you place the disc in the tray with the label side facing up.

My floppy disk drive cannot write to a diskette

- The diskette is write-protected. Disable the write-protect feature or use a diskette that is not write-protected.
- Check that the diskette is properly inserted into the floppy disk drive.

My speaker has no sound

- The built-in speaker is turned off. Press Fn+F3 to turn on the speaker.
- The speaker volume is turned to the minimum. Press Fn+F4, and then press ↑ or → to increase the volume.
- If your computer is powered by the battery, check that the battery is connected properly and that it is charged.
- If you are using an application that has its own volume control, check that the volume is turned up.
- Check the volume controls in Windows 98.
- If you have connected a headphone or an audio cable to the Headphone connector, disconnect the cable.

When I press Fn+F3, I see the message "Sound Disabled"

Click the System icon in the Control Panel. Change the settings under Device Manager so that sound is enabled.

My modem does not work

- Check that the phone line is plugged into the line jack. See "Connecting a Phone Line" on page 34 for details.
- Check that the phone line is working. You can check the line by plugging in an ordinary phone and listening for a dial tone.

- Check that the phone number the program is dialing is correct.
- Check that the software you are using is compatible with the computer modem. (All preinstalled programs are compatible.) Call the software publisher.

My modem connection is slow

The computer's modem uses K56flex™ technology / V.90. Many factors influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider, check the following:

- Have your phone company check that your phone line is free from any line noise.
- If your problem is fax-related, check that there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your Internet Service Provider, check that the ISP is not experiencing technical problems.
- If you have a second phone line available, try connecting the modem to that line.

My mouse does not work

- If you are using an external mouse, check that the mouse is plugged into the USB connector. See "Connecting an External USB Mouse" on page 38 for details.

I cannot use DV devices and messages appear on the screen

- Check that the DV device is turned on and that the cables are properly connected.
- If you are using multiple i.LINK devices, the combination of the connected devices may cause unstable operation. In this case, turn off the power to all connected devices and disconnect unused devices. Check the connection, then turn on the power again.

My computer does not shut down

It is best to shut down your computer using the Shut Down command on the Windows 98 Start menu. Using other methods, including those listed here, may result in loss of unsaved data. If the Shut Down command does not work properly, follow these steps:

- Restart the computer by pressing Ctrl+Alt+Delete. If this does not work, slide the power switch forward and hold it for four seconds.
- Unplug the computer from the AC adapter and remove the battery pack from your computer.

My PC card is not working

- Make sure the PC card is compatible with Windows 98.
- Use the Sony Notebook Setup utility to disable devices you are not currently using.

The game images or video images are not clear

Right-click the application bar of the PowerPanel software, choose CPU speed settings, and remove the check from the Auto box. Then set the speed control to 100%. See the online help of the PowerPanel help file for details.

There is a vertical line when shooting a bright subject with a dark background using the camera

- This is a phenomenon called “smear.” This is not a malfunction.

The image in the viewfinder of “Smart Capture” is grainy

- If you are shooting an image of minimum size, such as 40 x 30, the image may appear grainy.
- If you are shooting a subject that is moving rapidly, there may be a gap. This is not a malfunction.

The images captured with the camera are not clear

- Shooting under fluorescent light may produce reflections.
- Red or green noise may occur if the captured images include dark portions.
- If you import a still image of resolution 640 x 480, the image may appear grainy.
- The viewing image and the captured image may differ when you import a still image of size 640 x 480.
- Check that the lens of the camera lens is clean.
- Use the focus ring to adjust the focus.

There are picture gaps and sound gaps when importing video images

- If you are shooting using a battery pack, use the AC profile in PowerPanel. See the PowerPanel software help file for details.
- Gaps may occur due to the effect settings in the Smart Capture software. See the online help of the Smart Capture help file for details.

The camera does not show any images

- Check that you are not using any other application, such as Smart Capture, which is using the camera. If the camera still does not show any images, restart your computer.
- Pressing Ctrl+Alt+Delete or turning off the computer with the power switch may result in data loss in files that are currently open.

I cannot record using Smart Capture, Smart Write, or Smart Label

1. Double-click in the task tray.
2. Select Properties from the Option menu.
3. Check Record and Microphone, and click OK.
4. Uncheck “Mute” in microphone if it is checked.

Smart Write and Smart Label do not start

Reinstall the software using the Application Recovery CD.

Using the System and Application Recovery CDs

The following sections describe how to use the System Recovery and Application Recovery utilities. You need to connect the optional PCGA-CD5 CD-ROM drive to use the System and Application Recovery CDs.

Using the System Recovery CD(s)

You can reinstall software titles that shipped with your computer if they are corrupted or accidentally erased. You may not need to recover the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or software title may correct the problem. Use the Application Recovery CD(s) to reinstall individual applications or device drivers. See "Using the Application Recovery CD(s)" on page 82.

The System Recovery CD(s) contain a backup copy of all the software originally installed on your hard disk drive. **It can be used only to recover the hard disk of the computer you purchased.**

The System Recovery utility gives you three options:

- **Full Restore without Format** restores all the software titles that originally came with your computer without formatting the hard disk.
- **Full Restore with Format** formats the hard disk drive and then restores all the original software.
- **Operating System Only** restores the Windows 98 operating system, the computer utility programs, and the device drivers that shipped with your computer.

! **If you choose the Full Restore with Format or Operating System Only option, your hard disk will be formatted, which removes all the information on the hard disk drive. You will lose any software you have installed and any other files you have created since you started to use your computer. This means you will have to reinstall any applications that were not included with the computer when you purchased it. If you choose the Full Restore without Format option, you may need to reinstall applications that were not included with the computer when you purchased it. If you have any questions on using the System Recovery CD(s), contact Sony Customer Support.**

To use the System Recovery CD(s)

The optional PCGA-CD5 CD-ROM drive must be connected to the computer to use the System Recovery CD(s).

You need to complete the Windows® 98 registration process when you use the System Recovery CD. Make sure you have the product ID number located on the cover of your Microsoft Windows 98 *Getting Started* manual. You will need this number to complete the recovery process.

1. Insert the Sony System Recovery CD in the CD-ROM drive.
2. Shut down your computer as described in "Shutting Down Your C1 PictureBook Computer" on page 13.
3. Wait four seconds and turn on your computer.
4. Click OK to signify you have read and accept the Microsoft End-User License Agreement.
5. When the System Recovery menu appears, follow the on-screen instructions to complete the recovery process.

Your system may include one or two System Recovery CDs. If you have two System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has ben installed.

The recovery process takes between 30 to 60 minutes to complete.

If your computer does not start from the Recovery CD

1. Slide the power switch forward and hold it for more than four seconds to turn off the computer.
2. Turn on the computer and press the F2 key when the Sony logo appears. The BIOS setup menu screen appears.
3. Press the arrow keys to select the Exit menu.
4. Press the arrow keys to select Get Default Values and then press the Enter key. The message "Load default configuration now?" appears.
5. Check that [Yes] is selected, then press the Enter key.
6. Press the arrow keys to select Exit (Save Changes) and then press the Enter key. The message "Save configuration changes and exit now?" appears.
7. Check that [Yes] is selected, then press the Enter key. The computer restarts from the Recovery CD.

Using the Application Recovery CD(s)

The Application Recovery CD(s) allow you to reinstall individual applications and device drivers if they are corrupted or accidentally erased. Reinstalling an individual device driver or software title may correct a problem you are experiencing with your computer, and you may not need to recover the entire contents of your hard drive. If you do need to reinstall all the software titles that shipped with your computer, use the System Recovery CD(s). See "Using the System Recovery CD(s)" on page 80.

You must be in Windows to run the Application Recovery CDs. The application will not run from DOS. If you have any questions on using the Application Recovery CDs, contact Sony Customer Support.

Some applications on the Application Recovery CDs must be decompressed before the installation process begins. Your screen does not change while the files are decompressed. The time to decompress an application varies and may be as long as 30 minutes.

To use the Application Recovery CD(s)

1. Turn on your computer. If your computer is already on, close all applications.
2. When the Windows desktop appears, insert the first Sony Application Recovery CD in the CD-ROM drive. The Application Recovery utility loads automatically.
3. When the Application Recovery menu appears, follow the on-screen instructions to complete the recovery process.

You may be prompted to insert the second CD, depending on the application you want to restore.

Your system may include one or two Application Recovery CDs. If you have two Application Recovery CDs, insert the first CD to run the Application Recovery program. You may be prompted to insert the second CD, depending on the application you wish to restore.

For a list of the contents of the Application Recovery CD(s), see the online version of *Read Me First*.

Notes on Use

This section describes safety guidelines and precautions to help protect your computer from potential damage.

On Handling the LCD Screen

- Do not leave the LCD facing the sun as it can damage the LCD. Be careful when using the computer near a window.
- Do not scratch the LCD. Do not exert pressure on the LCD or on the top of the computer. This could cause malfunction.
- Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The residual image disappears in a while. You can use a screen saver to prevent residual images.
- The screen becomes warm during operation. This is normal and does not indicate a malfunction.
- The LCD is manufactured using high-precision technology. You may, however, see tiny black points and / or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On the Power Source

- Your computer operates on 100V-240V AC 50 / 60 Hz.
- Do not share the AC outlet with other power-consuming equipment, such as a copying machine or shredder.
- You can purchase a power strip with a surge protector. This device may prevent damage to your computer caused by sudden power surges such as those that may occur during an electrical storm.
- Do not place heavy objects on the AC adapter or its cord.

- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Unplug your computer from the wall outlet if you will not be using the computer for a long time.
- When the AC adapter is not used, unplug it from the AC outlet.
- Use only the supplied AC adapter. Do not use any AC adapter not specifically designed for the computer.

On Handling

- Clean the cabinet with a soft, dry cloth or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of your computer.
- Should any solid object or liquid fall into the computer, shut down your computer and then unplug it. You may want to have the computer checked by qualified personnel before operating it any further.
- Do not drop the computer or place heavy objects on top of the computer.

On Installation

- Do not place your computer in a location subject to:
  - Heat sources, such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Moisture or rain
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95º F (35º C) or less than 50º F (10º C)
  - High humidity
- Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
- Provide adequate air circulation to prevent internal heat build-up. Do not place your computer on porous surfaces such as rugs or blankets, or near materials such as curtains or draperies that may block its ventilation slots. Leave a space of at least 8 inches behind the back panel of the computer.

- The computer uses high-frequency radio signals and may cause interference to radio or TV reception. Should this occur, relocate the computer a suitable distance away from the set.
- Use only specified peripheral equipment and interface cables; otherwise, problems may result.
- Do not use cut or damaged connection cables.
- Your computer will not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX).
- If the telephone company makes a service call to your home or office and determines that your computer is responsible for a problem, the telephone company may bill you for the service call. Also, if you do not disconnect your computer when it is adversely affecting the telephone line, the telephone company has the right to disconnect your service until you correct the problem.

On Moisture Condensation

If the computer is brought directly from a cold location to a warm one, moisture may condense inside your computer. In this case, allow at least an hour before turning on your computer. If any problems occur, unplug your computer, and contact your Sony Service Center.

On Upgrading the System

- It is recommended that your memory upgrade be performed by an authorized Sony Service Center or a qualified technician.

On Handling Diskettes

- Do not open the shutter manually and touch the surface of the diskette.
- Keep diskettes away from magnets.
- Keep diskettes away from direct sunlight and other heat sources.

On Handling CD-ROMs

- Do not touch the surface of the disc.
- Do not drop or bend the disc.

On Cleaning CD-ROMs

- Fingerprints and dust on the surface of a disc may cause read errors. Proper care of the disc is essential to maintain its reliability. Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray, as they may cause damage to the disc.
- For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.

On Using Batteries

- Never leave the battery pack in temperatures above 140° F (60° C), such as in a car parked in the sun or under direct sunlight.
- Battery life is shorter in a cold environment. This is due to decreased battery efficiency at low temperatures.
- Charge the batteries at temperatures between 50° F and 80° F (10° C to 30° C). Lower temperatures require a longer charging time.
- While the battery is in use or being discharged, the battery pack heats up. This is normal and is not cause for concern.
- Keep the battery pack away from all sources of heat.
- Keep the battery pack dry.
- Do not open or try to disassemble the battery pack.
- Do not expose the battery pack to any mechanical shock.
- If you are not using the computer for an extended period of time, remove the battery pack from the computer to prevent damage to the battery.
- If, after fully charging the battery pack, the battery power is still low, the battery pack may be reaching the end of its life and should be replaced.
- You do not need to discharge the battery before recharging.
- If you have not used the battery pack for a considerable amount of time, recharge the battery.

On Maintenance

- Make sure to disconnect the AC adapter before cleaning the computer.
- Avoid rubbing the LCD screen as this can damage the screen. Use a soft, dry cloth to wipe the LCD screen.
- Clean the computer with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.

Limited Warranty Statement

C1 PictureBook Computer Warranty

The limited warranty on your C1 PictureBook Computer covers parts and labor against defects in material or workmanship for a period of three months from the original date of purchase. You can extend the warranty period for an additional nine months by registering your computer. See “Registering Your Computer” on page 15. Once you register your computer, the limited warranty period is twelve months from the original date of purchase.

There is a separate warranty for the battery included with your computer. See “Battery Limited Warranty” on page 93.

For the purpose of this Limited Warranty “SONY” means SONY ELECTRONICS INC. for Products purchased in the United States of America and Sony of Canada Ltd. for Products purchased in Canada. SONY warrants this computer hardware product (“the Product”) against defects in material or workmanship as follows:

1. Labor: For a period of ninety (90) calendar days from the original date of purchase from SONY or a SONY authorized reseller, SONY will repair defects in material or workmanship in the Product at no charge, or pay the associated labor charges to a SONY authorized personal computer service facility. The ninety (90) day warranty period is extendible only to the original purchaser, for an additional period of nine (9) months, for a total of twelve (12) months from date of purchase when the Product is registered electronically prior to the expiry of ninety (90) days from the original date of purchase. After the applicable period you must pay for all labor charges.

2. Parts: For a period of ninety (90) calendar days from the original date of purchase from SONY or a SONY authorized reseller, SONY will supply, at no charge, new or rebuilt, at SONY’s option, replacement parts in exchange for defective parts. Any replacement parts will be warranted for the remainder of the original warranty period or ninety (90) calendar days from installation by SONY’s authorized personal computer service facility, whichever is longer. The ninety (90) day warranty period is extendible only to the original purchaser, for an additional period of nine (9) months, for a total of twelve (12) months from date of purchase when the Product is registered electronically prior to the expiry of ninety (90) days from the original date of purchase. All defective parts replaced under this Limited Warranty will become the property of SONY.

This Limited Warranty covers only the hardware components packaged with the Product. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the Product; SONY excludes all warranties express or implied in respect of any software provided with the product and any such software is provided “AS IS” unless expressly provided for in any enclosed software limited warranty. Please refer to the End User License Agreements included with the Product for your rights and obligations with respect to the software.

This Limited Warranty is non-transferable. Proof of purchase in the form of a bill of sale (which is evidence that the Product is within the warranty period) must be presented to obtain warranty service. In addition, if replacement parts are required and you wish to receive the most expedient service available, you will be required to provide SONY with a credit card authorization to bill your credit card in the event you fail to return the original parts in the postage-paid envelope we provide. The credit card will only be charged for SONY's list price for the part if the original part has not been returned within thirty (30) days.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated below for further information.

With respect to all service provided, it is your responsibility prior to Product service to backup the contents of your hard drive, including any data you have stored or software you have installed on the hard drive. It is likely that the contents of your hard drive will be lost or reformatted in the course of service and SONY will not be responsible for any damage to or loss of any programs, data or other information stored on any media or any part of any Product serviced hereunder or any consequential damages resulting therefrom.

IF DURING THE REPAIR OF THE PRODUCT THE CONTENTS OF THE HARD DRIVE ARE ALTERED, DELETED, OR IN ANY WAY MODIFIED, SONY IS NOT RESPONSBILE WHATSOEVER. YOUR PRODUCT WILL BE RETURNED TO YOU CONFIGURED AS ORIGINALLY PURCHASED (SUBJECT TO AVAILABILITY OF SOFTWARE).

Be sure to remove all third party hardware, software, features, parts, options, alterations, and attachments not warranted by SONY prior to sending the Product to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America and Canada. This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR OTHER DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state, or province to province.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, online knowledge base, frequently asked questions, and free updates via the Internet: http://www.sony.com/pcsupport/

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC (476-6972)

Save this for future reference.

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Cette garantie restreinte est incessible.

Pour vous prévaloir du service au titre de la garantie, vous devrez présenter une preuve d’achat sous forme de facture de vente attestant que le Produit est couvert par la garantie en vigueur. Par ailleurs, si des pièces doivent être remplacées et que vous désirez obtenir le service le plus rapide possible, vous devrez fournir à SONY une autorisation lui permettant d’en porter le montant à votre carte de crédit advenant que vous négligiez de retourner les pièces originales dans l’enveloppe affranchie qui vous est fournie. Seul le prix courant de SONY pour cette pièce sera porté à votre carte de crédit si la pièce ne lui est pas retournée dans un délai de trente (30) jours.

Vous pouvez avoir droit au service de garantie exprès durant la période de garantie, sous réserve de certaines restrictions. Pour tout renseignement, veuillez communiquer avec SONY de la façon indiquée ci-après.

Vous avez l’entière responsabilité de faire une copie de sauvegarde du contenu du disque dur, incluant toute donnée en mémoire ou tout logiciel que vous y avez installé. Il est fort probable que le contenu du disque dur sera reformaté ou perdu en cours de service et SONY ne pourra être tenue responsable d’aucun dommage ni de la perte des programmes, des données ou de toute autre information gardée en mémoire sur tout support d’information ou sur toute partie de tout Produit en réparation.

SI, DURANT LA RÉPARATION DU PRODUIT, LE CONTENU DU DISQUE DUR EST ALTÉRÉ, SUPPRIMÉ OU MODIFIÉ, SONY N’EN SERA AUCUNEMENT RESPONSABLE. LE PRODUIT VOUS SERA RETOURNÉ TEL QU’IL ÉTAIT CONFIGURÉ QUAND VOUS L’AVEZ ACHETÉ (SOUS RÉSERVE DE LA DISPONIBILITÉ DU LOGICIEL).

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Vous trouverez sur l'Internet un appui direct, une base de renseignements, une foire aux questions et des mises à jour gratuites sous http://www.sony.com/pcsupport/

Pour de l'information sur les produits, de l'aide avec le service, la résolution de problèmes de service ou pour une aide technique, veuillez composer le 1-888-4SONYPC (476-6972).

À conserver pour référence future.

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Battery Limited Warranty

The limited warranty on the battery included with your VAIO PictureBook Notebook covers defects in material or workmanship for a period of 30 days from the original date of purchase. This warranty is not extendable.

For the purposes of this Limited Warranty, "SONY" means Sony Electronics Inc. for Products purchased in the United States of America and Sony of Canada Ltd. for Products purchased in Canada. Sony warrants this Product against defects in material or workmanship for thirty (30) days from your purchase date. If this Product is determined to be defective, SONY will replace the Product at no charge to you. This Limited Warranty contains your exclusive remedy. SONY shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights which vary from state to state or province to province. For information on obtaining warranty service, please call SONY at 1-888-4SONYPC (1-888-476-6972).

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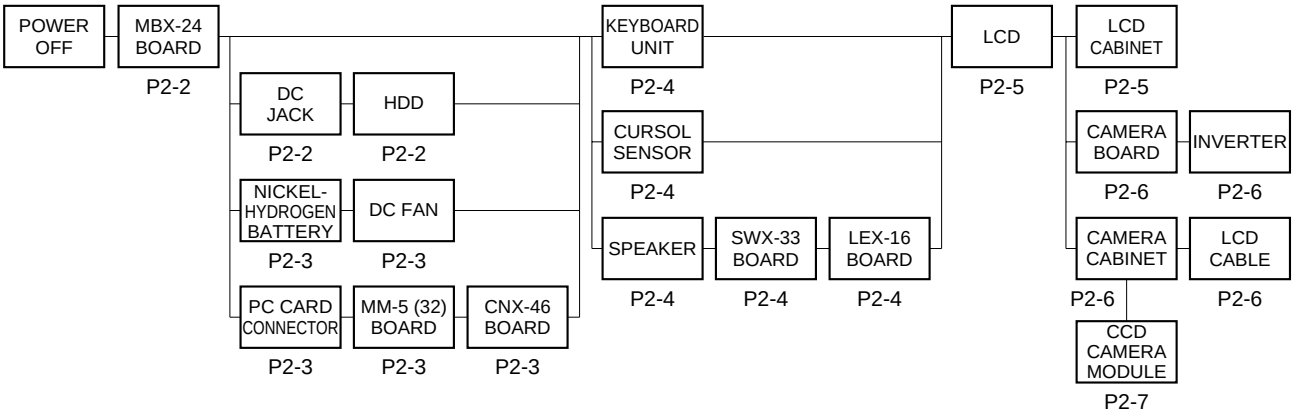
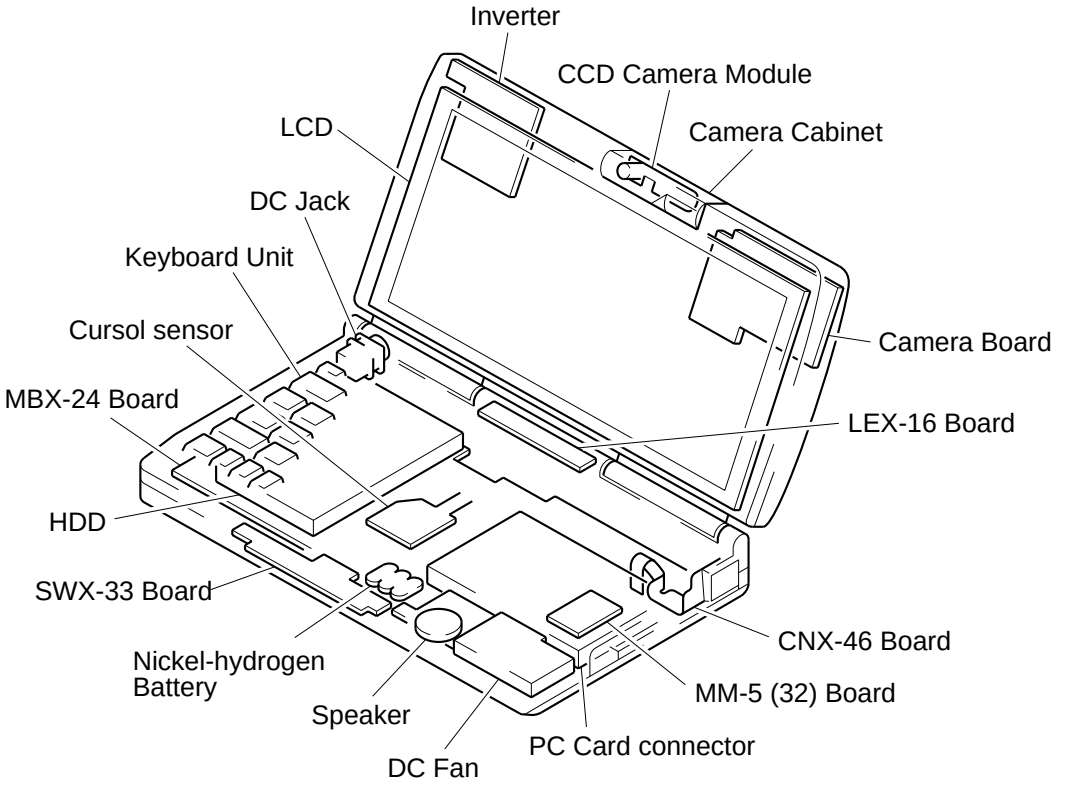
2-1. Flowchart

• Page x-x indicates the page for the topic.
• Note that HDDs (Hard Disc Drives) are easily damaged by shock of impact.



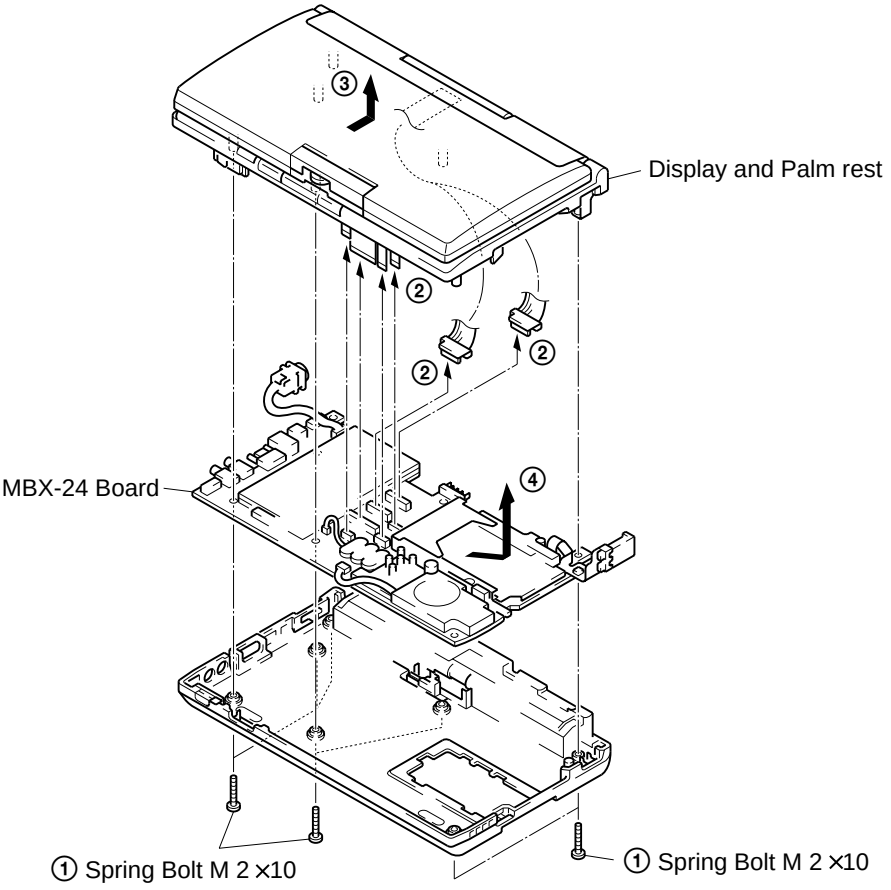
2-2. Electric Parts Arrangement Diagram



• Note that HDDs (Hard Disc Drives) are easily damaged by shock of impact.

2-3. Removal

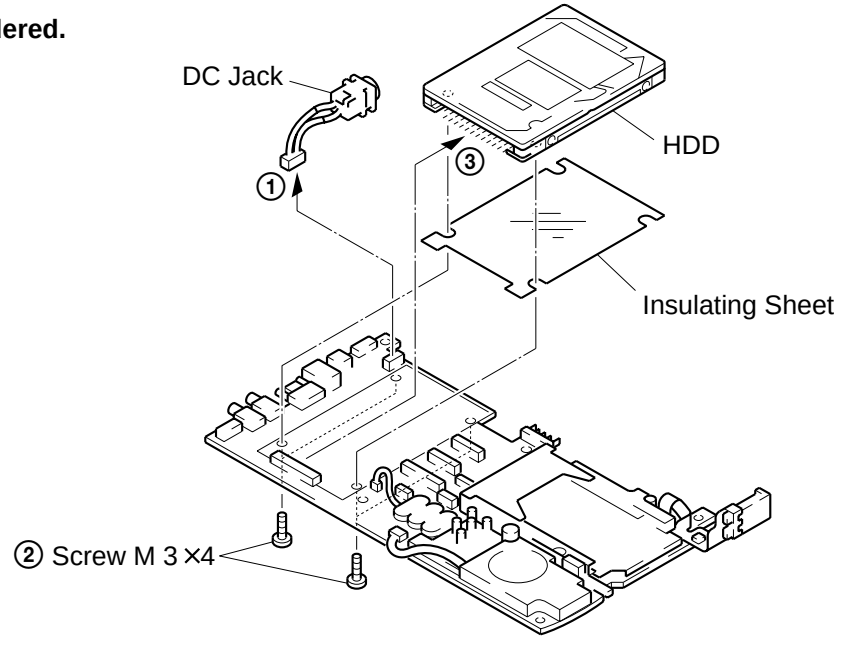
1. MBX-24 board



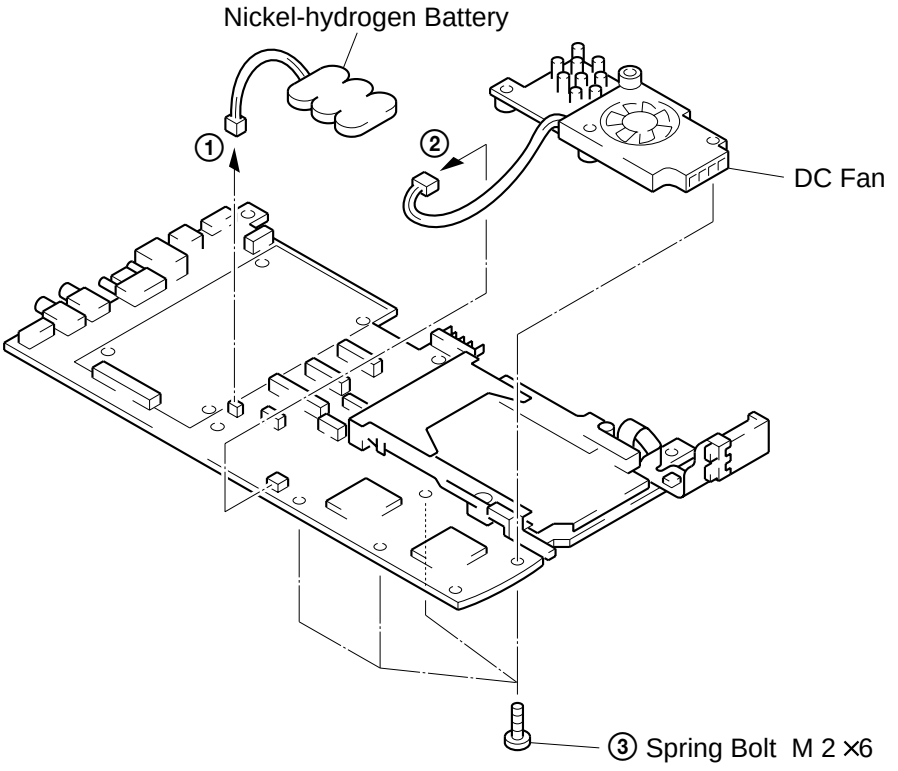
2. DC Jack, HDD

Note

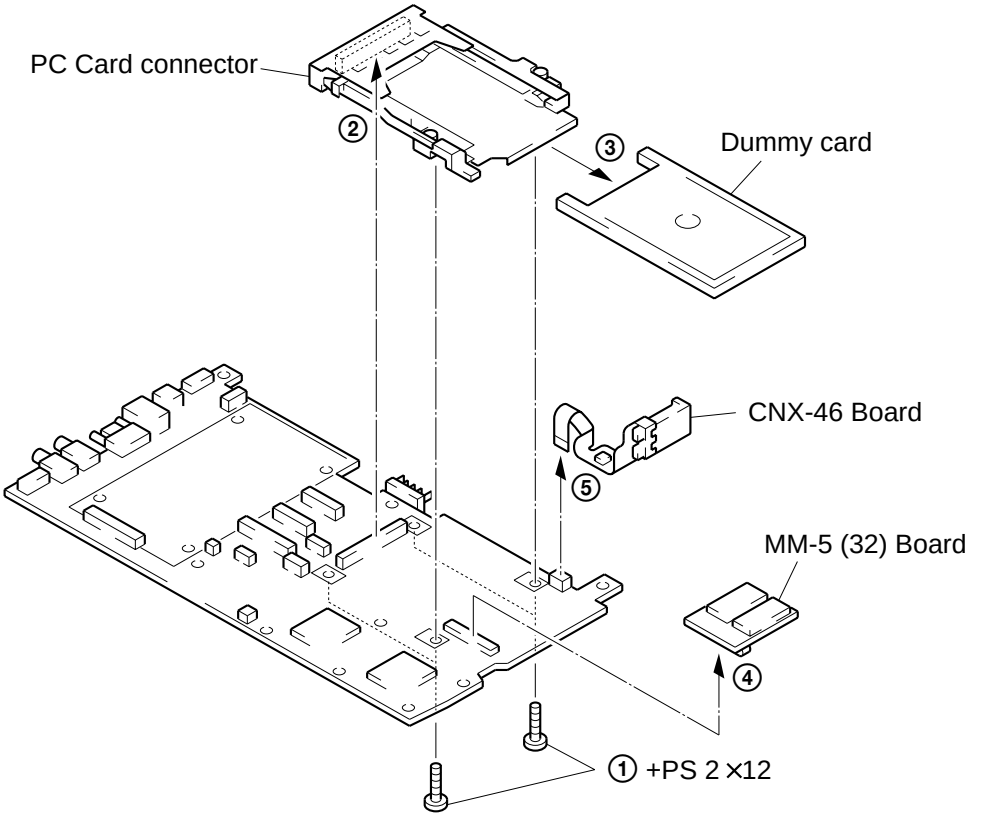
The DC jack is soldered.



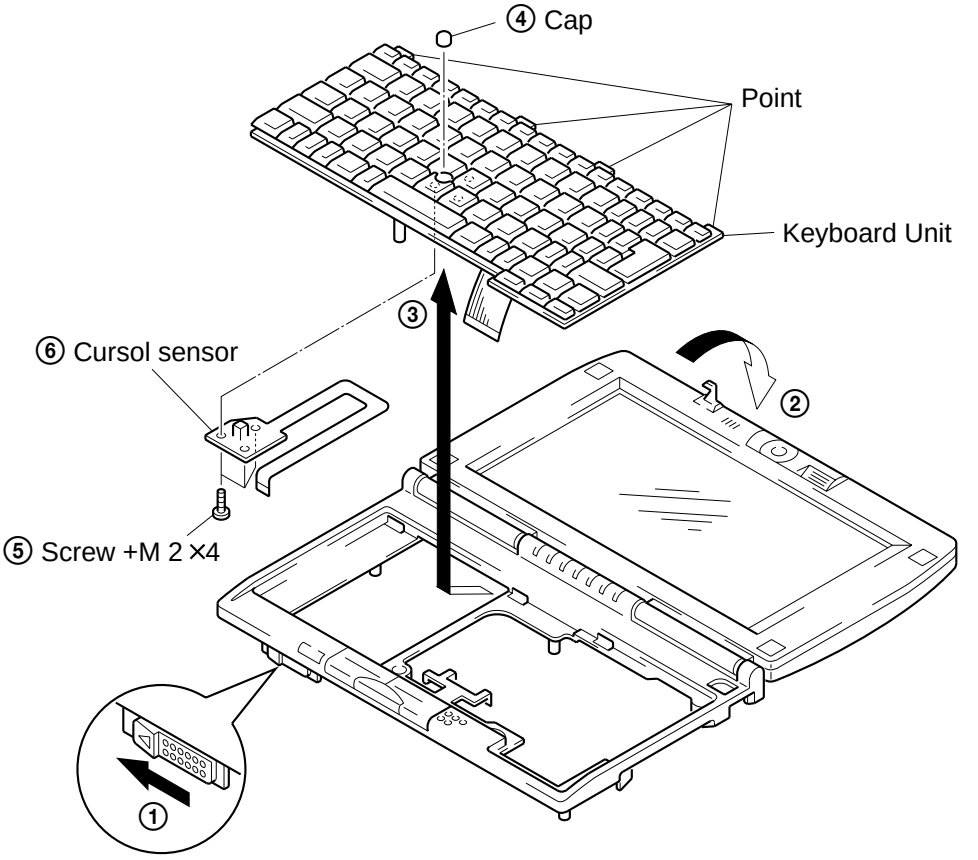
3. Nickel-hydrogen battery and DC fan



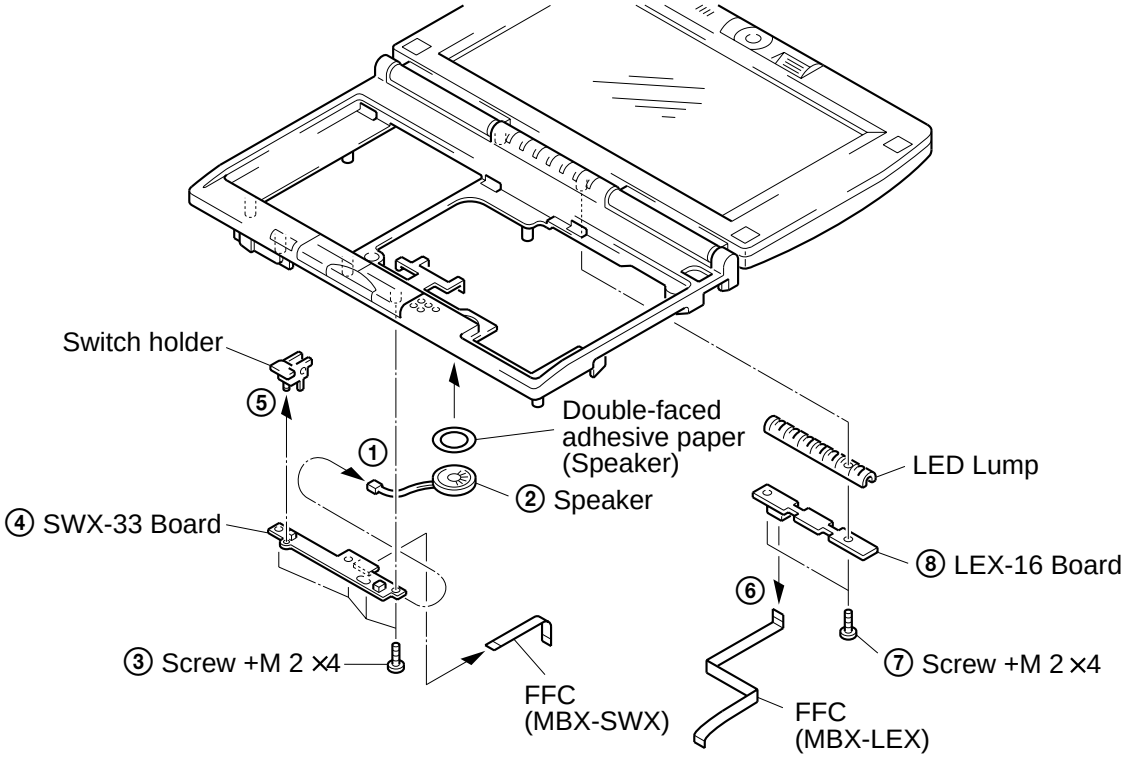
4. PC card connector, MM-5 (32) board and CNX-46 board



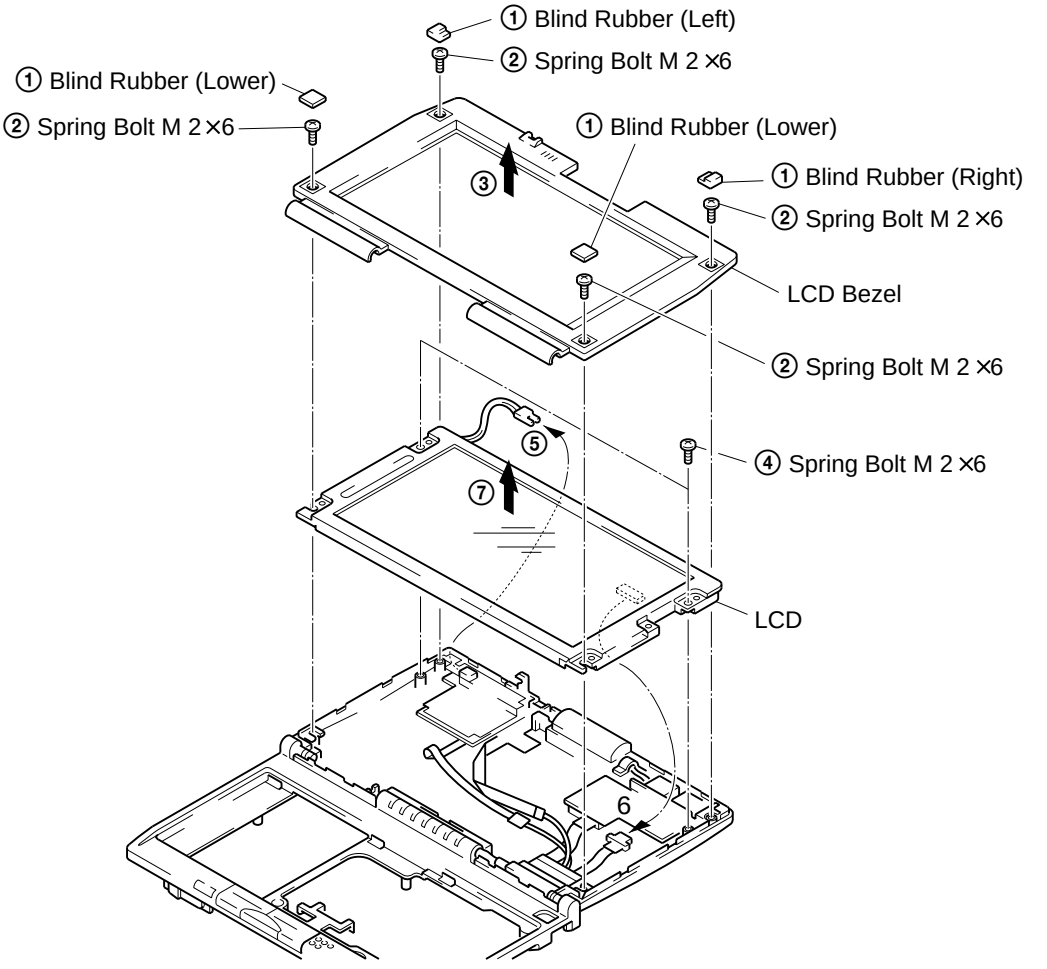
5. Keyboard unit, cursol sensor



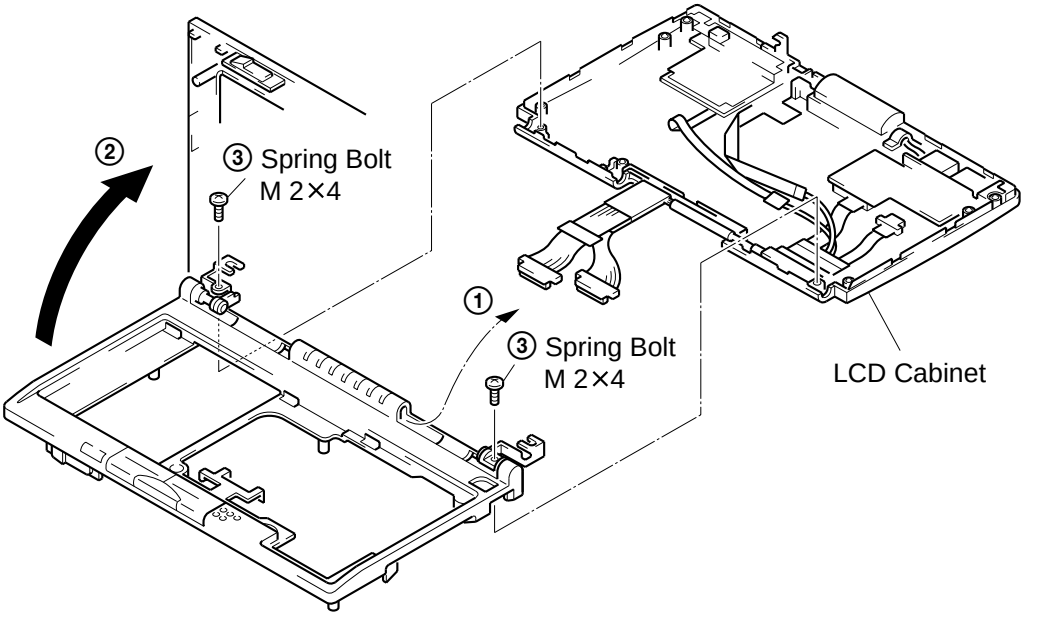
6. Speaker, SWX-33 board and LEX-16 board



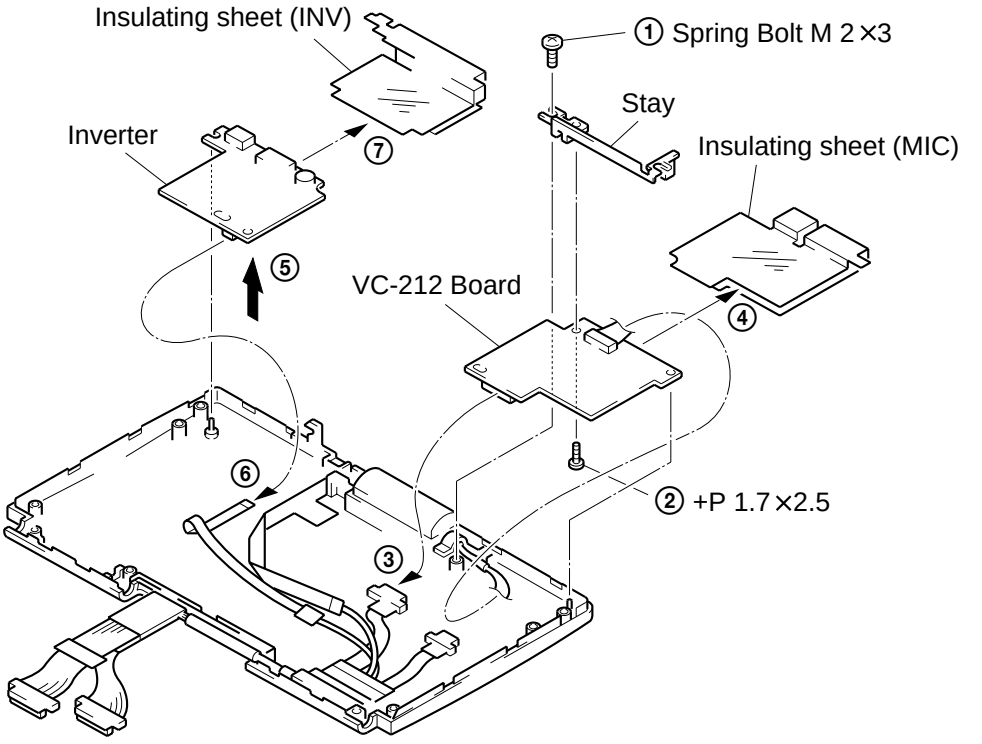
7. LCD



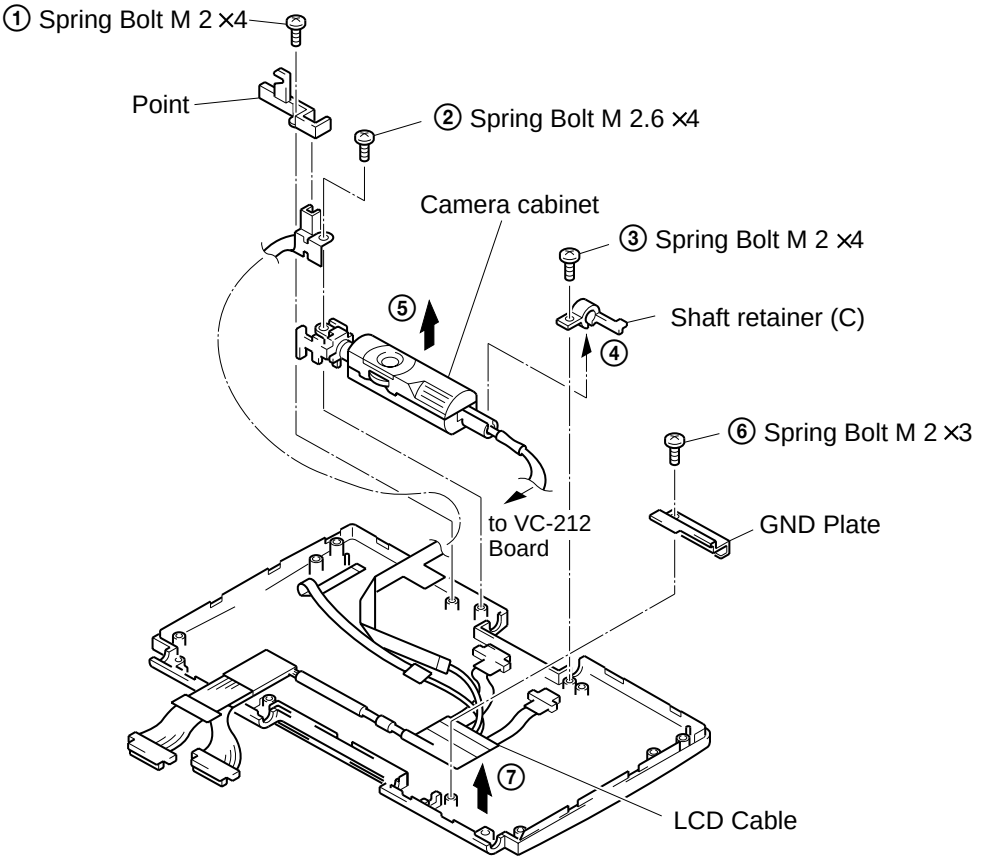
8. LCD cabinet



9. Camera board and inverter



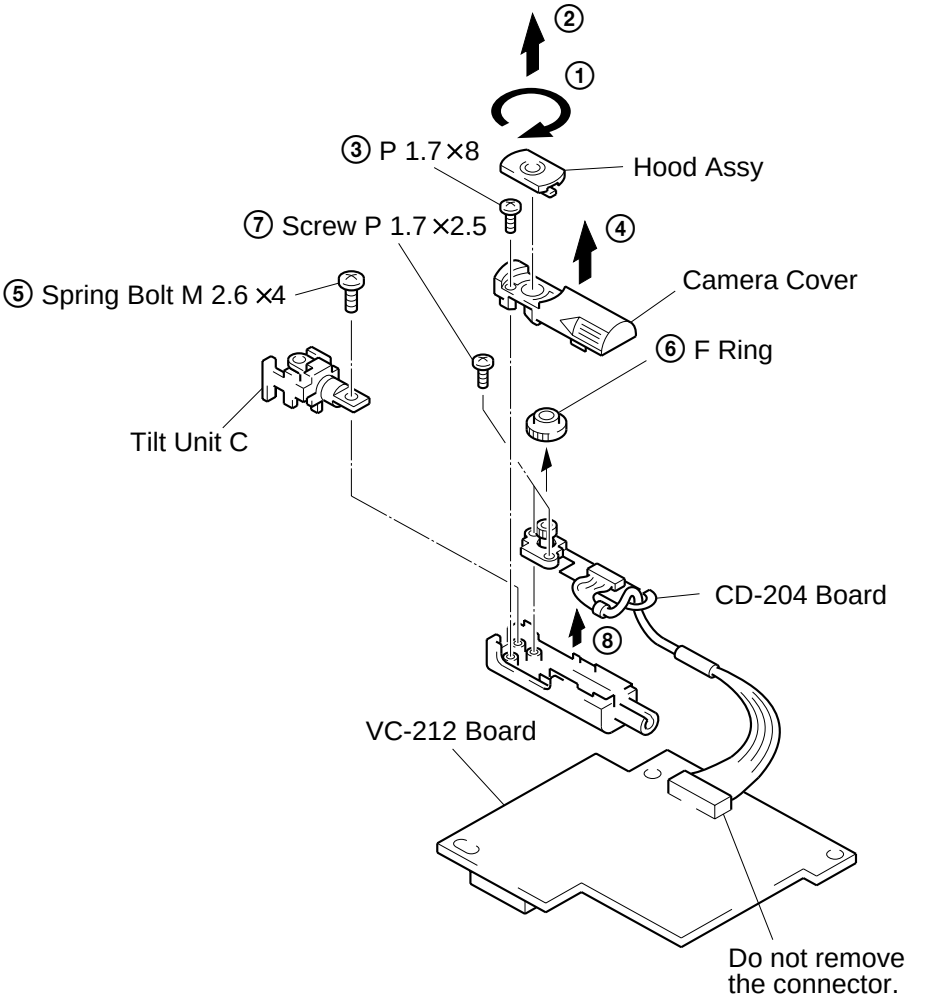
10.Camera cabinet and LCD cable



11. CCD camera cabinet

Note

Be sure to replace the CD-204 and VC-212 boards together.



CHAPTER 3.
SELF-DIAGNOSTICS

3-1. Note

This chapter describes the items to be checked and the self-tests to be performed using the main unit, floppy-disk drive, and CD-ROM drive, Port Replicator.

3-2. Necessary Tools

- PCG-C1X/C1F main unit
- Floppy-disk drive
- CD-ROM drive
- Battery
- AC adaptor
- CD-ROM for self-Diagnostics
- Floppy disk for self-diagnostics (with DOS installed)
- Other tools required for the tests
  (Some of the following jigs may not necessarily be required, depending on the test to be performed.)
  - Jig for USB (for a USB port testing)
  - Jig for the Modem (for a modem loopback testing)
  - PCG-C1X/C1F series (for testing the IEEE 1394 interface and IrDA)

3-3. Start-up of the Self-Diagnostics Program

Connect a floppy-disk drive, CD-ROM drive, battery and AC adaptor, Port Replicator to the PCG-C1X/C1F (hereinafter referred to as the main unit).
Insert a floppy disk for self-diagnostics in the floppy-disk drive and a CD-ROM for self-diagnostics in the CD-ROM drive.

3-4. Diagnostics Using the Self-Diagnostics Program

Insert a floppy disk for self-diagnostics in the floppy-disk drive, and a CD-ROM for a self-diagnostics in the CD-ROM drive.
When the power of the main unit is turned on, the system starts up from the CD-ROM, and the following screen appears.

```
Diagnostics for Service  Version 1.0.
PCG-C1X/C1F

(C)1998 Sony Corporation All rights reserved.
Press any key to continue...
```

Press any key, and the Start menu will appear.

```
********** START MENU **********

1:Diagnostics for PCG-C1X/C1F (Self-Diagnostics)
2:PASSWORD BYPASS          (Password Bypass)
3:QUIT MAIN MENU           (Quit)
```

Move the cursor to the desired item, and press Enter.

• Diagnostics for PCG-C1X/C1F

When Diagnostics 1 is selected from the Start menu, the screen shown below will appear.

```
********** Diagnostics for PCG-C1X/C1F **********

1:Audio test Group...
2:Battery test...
       :
       :
```

Once you select an item, the self-diagnostics for that item will be performed.

Pressing keys and/or listening to sounds may be required. Follow the instructions on the screen.

∗ For details on items to be diagnosed, see “2-5. Test Items.” (Test items are subject to change.)

When the test ends normally:

*****
PASS
*****

When the test ends abnormally:

*****
FAIL
*****

• PASSWORD BYPASS

If the BIOS is locked with a password and you don’t know the password, use this function.

To use this function, another machine is necessary.

PASSWORD BYPASS is selected from the Start menu, the following screen appears.

```
Password Bypass Program 1.0
(C)1998 Sony Corporation All rights reserved.
Input last 7 digits of Serial number
(If serial xxxxxxxx-ooooooo,input serial number →► ooooooo)
Input serial number →►
```

Enter the last seven digits of the serial number and a temporary password will appear.

```
Bypassed pass word →► zzzzzzz
```

• QUIT MAIN MENU

Self-Diagnostics ends.

3-5. Test Items

• Audio test Group . . .

For audio testing.

No details are defined. You listens to the sound and evaluates the results.

• Battery test . . .

Test for charging and discharging of the battery.

If the battery is almost fully discharged or overcharged, an error may occur.

• Check System BIOS Revision . . .

The BIOS version will appear.

This test always ends in normal status. It's up to you to evaluate the results.

• FDD test . . .

Test to find defects in a floppy disk drive.

Be sure to insert a floppy disk without a write-protect tab for self-Diagnostics.

If some defect is detected, the data may be lost. The data should always be backed up.

• HDD test . . .

Test for the hard-disk drive.

The recognition test is done in the start-up process with the BIOS.

• Keyboard test . . .

Test for keyboard operation.

A keyboard appears on a screen. Press the keys one by one. Pressing a function key alone will not be recognized.

Press the desired function key with the → key.

If a disabled key is found, press the ESC key twice to end the test.

• IrDA test Group . . .

Communication test for IrDA.

The PCG-C1X/C1F for communication is required.

• LED test . . .

LEDs for the Power, Battery, hard-disk drive, Information, NumLock, CapsLock and ScrlLock will light one after another, in that order.

After checking all the LEDs, press the y key.

• Memory test Group . . .

Tests for memory.

The time required for testing depends on the memory capacity.

• Modem AT Command test . . .

Test for the modem.

This checks for generation of an AT command.

No actual call is required.

• System test . . .

Tests for items on the mother board.

DMA, IRQ, the CPU, etc. are checked.

• Track point
Move the cursor to the box, press the left button and then the center button.

• USB test . . .
Test for an USB port.
USB tools are required.

• Video test . . .
Test for an LCD display.
In the first half, checking that the screen is displayed within a frame and that the palette is normal is performed for your evaluation.
The second half is performed as self-diagnostics.

• Programmable power key test . . .
Test for a programmable power key.
Press it once.

• IEEE 1394 Interface test . . .
Communication test of the IEEE 1394.
A PCG-C1X/C1F series unit on which Windows will run is required.

• Modem loopback test . . .
Perform data transmission and reception between modems.
Tool modems are required.

• Camera
Camera test
Point the camera backward and check the display. In this position, also try focusing.
Point the camera toward you and check the display. In this position, also try focusing.

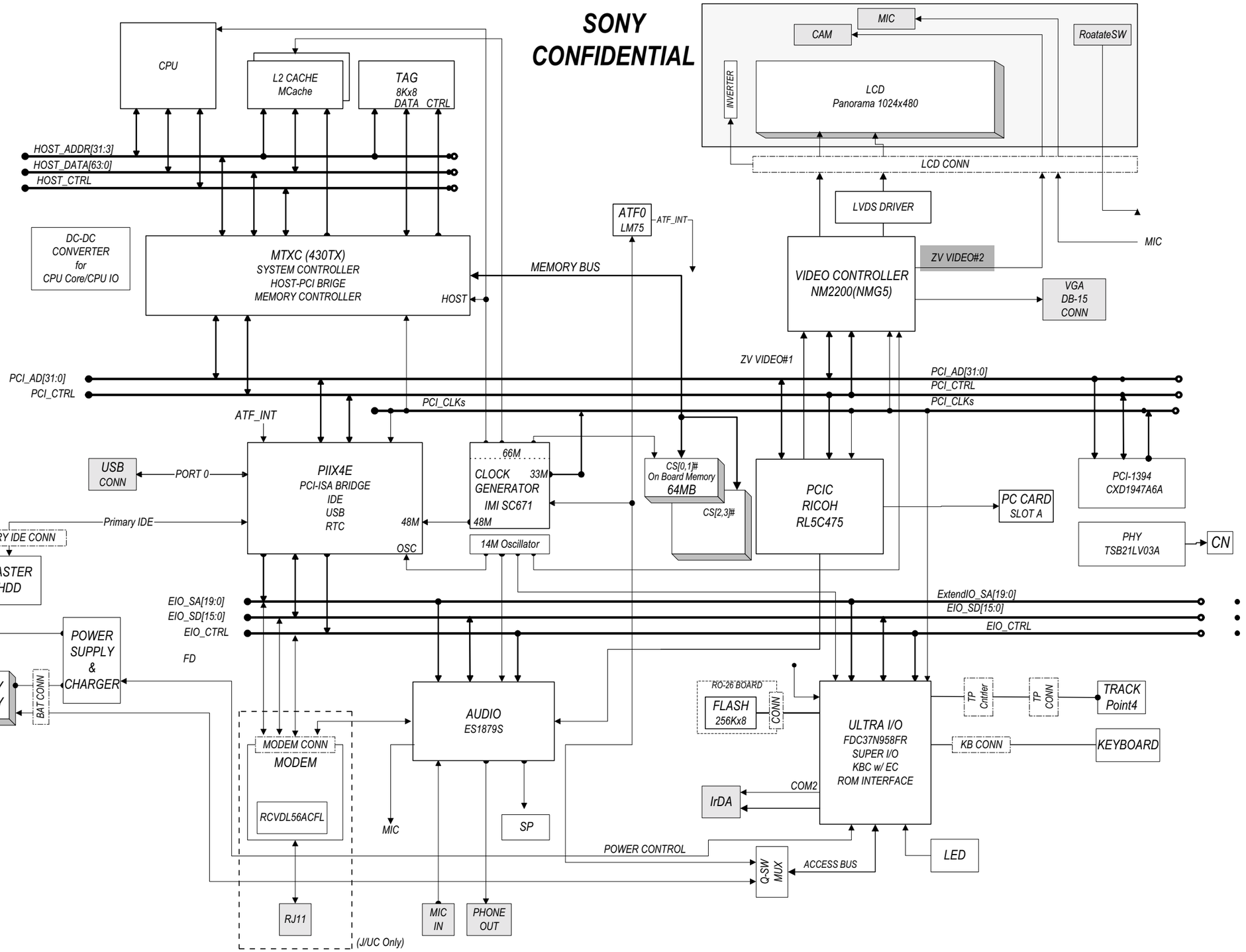
• Shutter
Press the shutter and check if the semipressed or pushed-in status is correctly recognized.

3-6. Tests that are not Supported

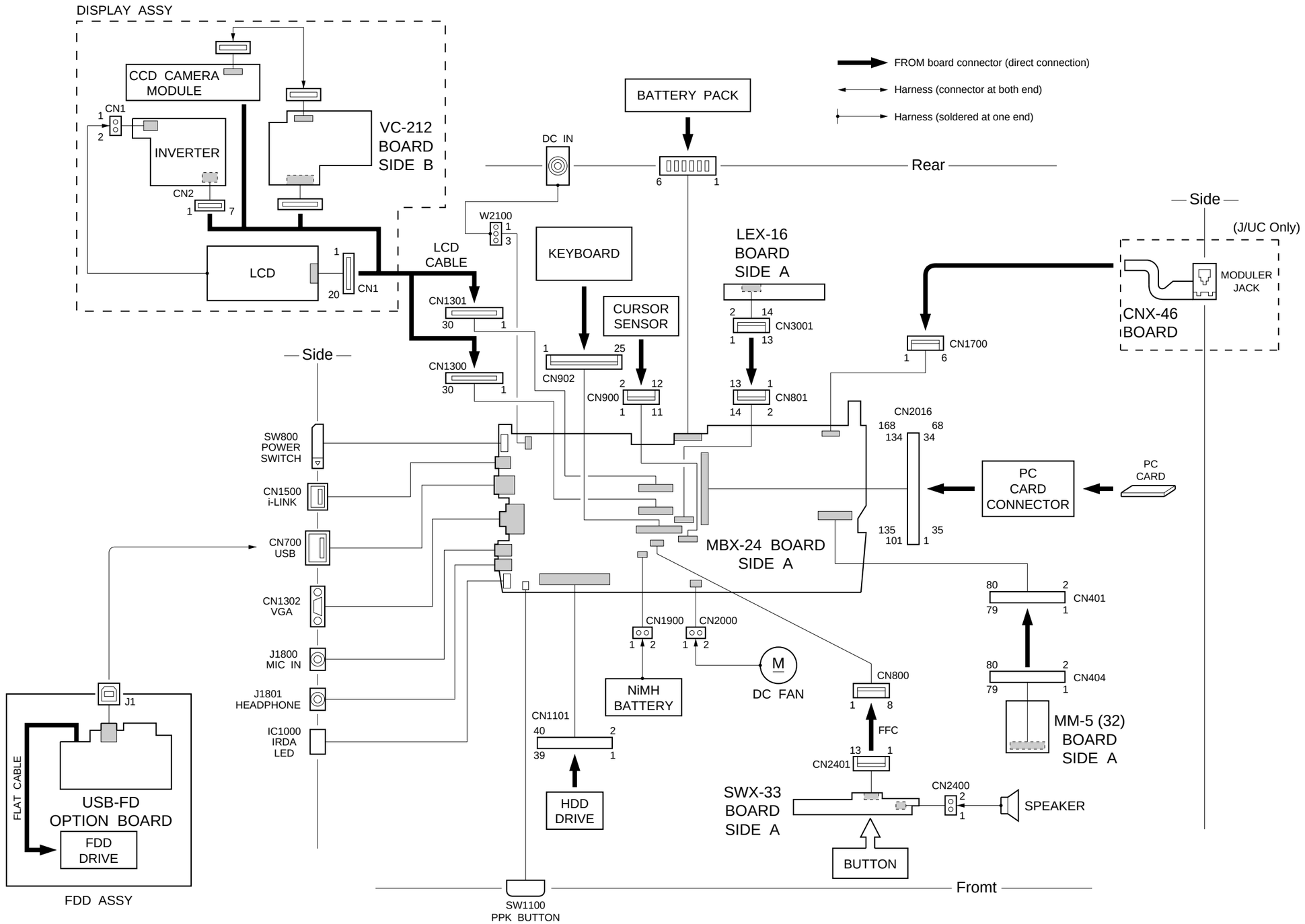
• PCMCIA test
The 16-bit PC-CARD test is replaced with the CD-ROM test.
Testing a CardBUS, ZV, etc. is not available, because such tests required special hardware.

CHAPTER 4.
BLOCK DIAGRAM

SONY
CONFIDENTIAL



CHAPTER 5.
FRAME HARNESS DIAGRAM

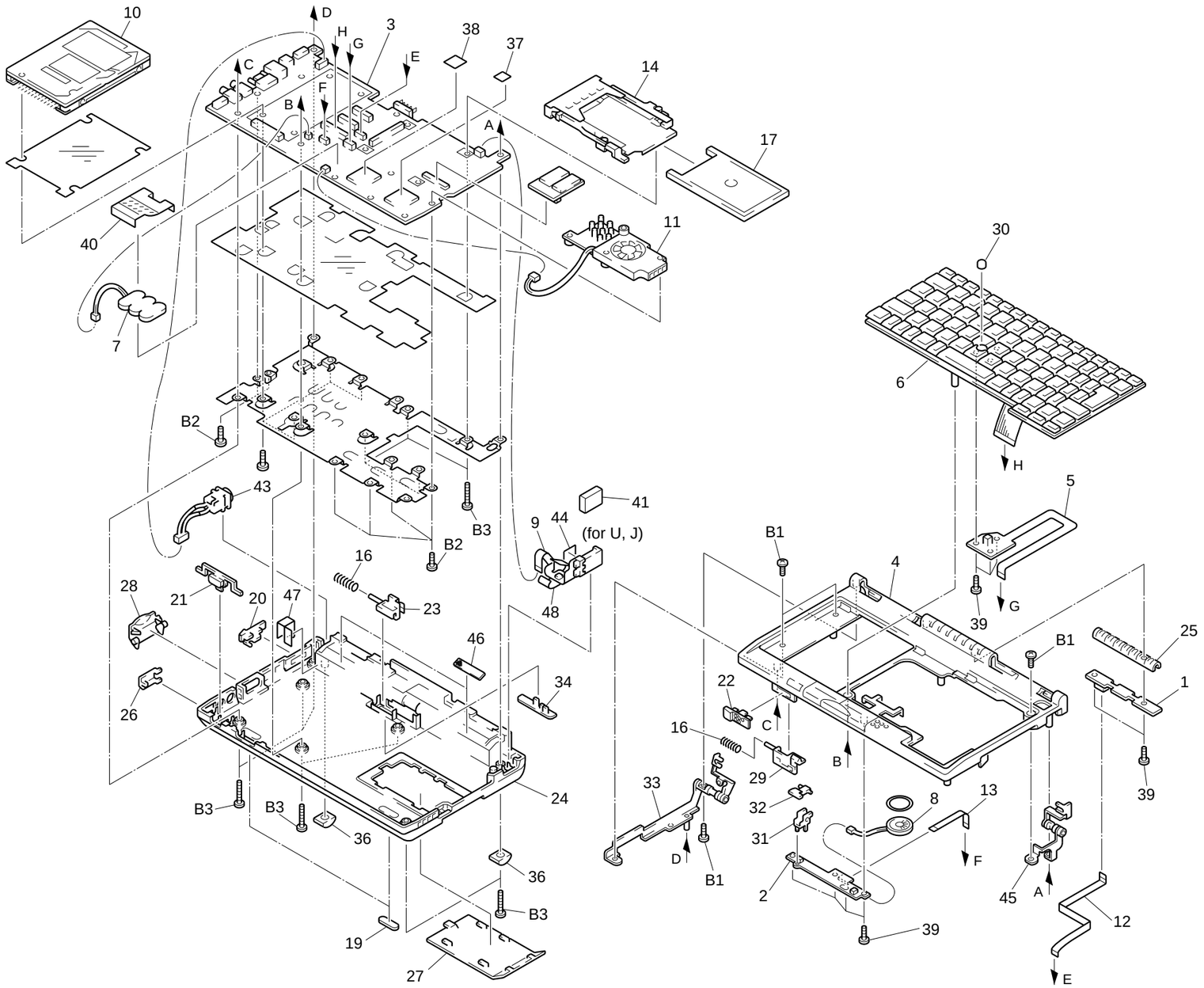


CHAPTER 6.
EXPLODED VIEW AND PARTS LIST

Note:
- Parts marked by ∗ are not normally in stock.
- Any part that has no part number is not available.

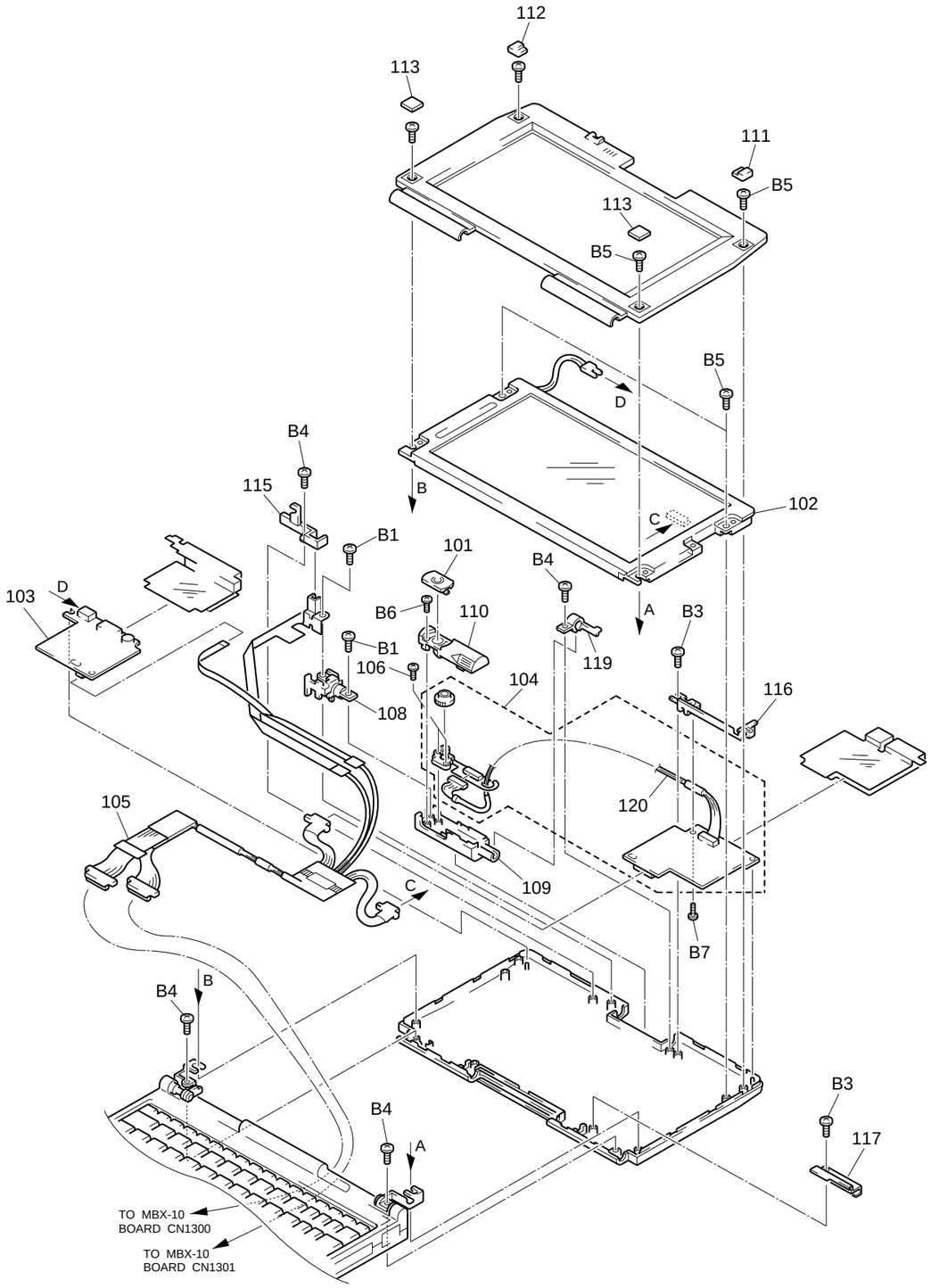
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. Main Unit



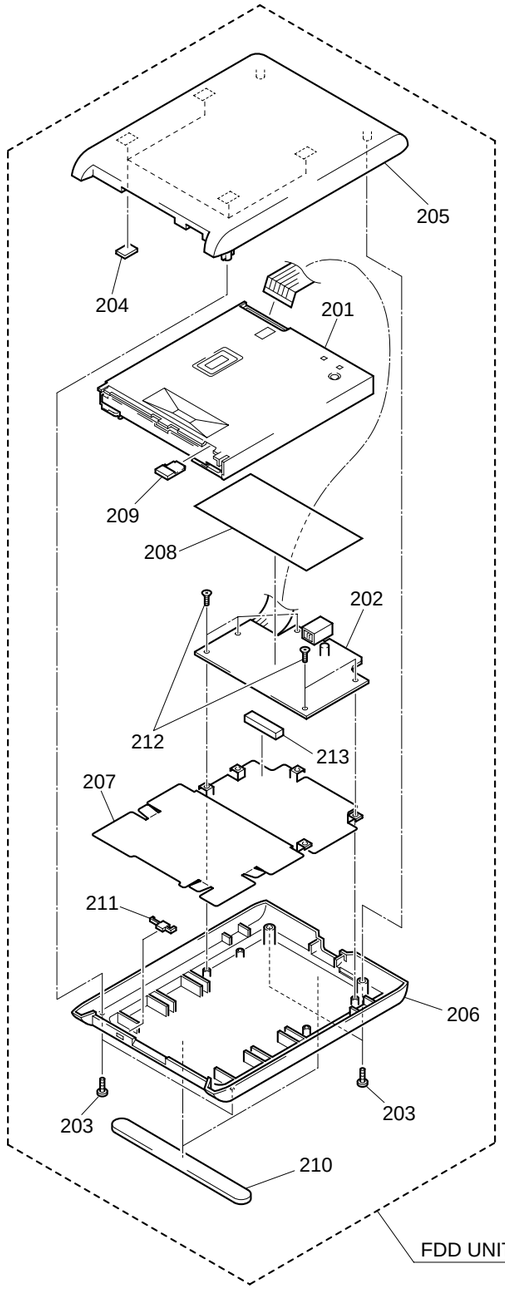
Ref.No.	Part No.	Description
1	A-8045-424-A	LEX-16 1200 ASSY (S)
2	A-8045-423-A	SWX-33 1200 ASSY (S)
3	A-8045-429-A	(C1X)•••MBX-24 1200 U ASSY (S)
	A-8045-430-A	(C1F)•••MBX-24 1200 E ASSY (S)
4	X-4621-845-3	REST SUB ASSY, PARM
5	1-475-931-11	SENSOR, CURSOR
6	A-8045-452-A	(C1X)•••KEY BOARD UNIT ASSY (S) UC
	A-8045-453-A	(C1F)•••KEY BOARD UNIT ASSY (S) GB
7	1-528-916-11	BATTERY, STORAGE, NICKEL
8	1-790-112-11	FPC (MIC-SW)
9	1-670-717-11	FPC (CNX-46)
10	1-772-014-11	HDD (4.3GB)
11	1-763-185-11	FAN, D.C.
12	1-783-845-11	FFC (MBX-LEX)
13	1-783-846-11	FFC (MBX-SWX)
14	1-785-224-11	CONNECTOR, PC CARD (EJECTOR)
16	2-300-616-02	SPRING, COMPRESSION
17	4-627-811-21	CARD, DUMMY
19	4-635-946-01	FOOT
20	4-639-062-01	BUTTON, POWER
21	4-639-063-02	BUTTON, PPK
22	4-639-064-01	BUTTON, OPEN
23	4-639-067-01	LATCH (BATTERY)
24	4-639-069-03	CABINET, BOTTOM
25	4-639-074-01	LAMP, LED
26	4-639-075-01	WINDOW, IRDA
27	4-639-076-01	LID, MEMORY
28	4-639-077-01	LID, VGA
29	4-639-079-01	LATCH (LCD)
30	4-639-080-01	CAP, SENSOR
31	4-639-083-01	HOLDER, SWITCH
32	4-639-084-01	LEVER, SWITCH
33	4-639-086-01	HINGE (L)
34	4-639-087-01	LEVER, BATTERY
36	4-639-099-01	FOOT (B), RUBBER
37	4-639-100-01	SHEET (C), THERMAL
38	4-639-101-01	SHEET (N), THERMAL
39	4-639-112-01	SCREW M2X4
40	4-640-620-01	INSULATION SHEET (BB)
41	4-641-172-01	(C1F)•••MODEM COVER PLATE
∗ 42	4-639-331-01	INSULATOR, MICROPHONE
43	1-959-014-11	HARNESS (DC JACK)
44	4-635-952-01	INSULATING SHEET (WJ)
45	4-639-088-02	HINGE (R)
46	4-640-231-01	INSULATING SHEET (DC JACK)
47	4-640-230-01	GASKET (CABINET)
48	4-636-345-01	TAPE (WJ), INSULATING
B1	4-640-694-11	BOLT (M2), SPRING
B3	7-628-253-55	SCREW +PS 2X12

6-2. Display Unit



Ref.No.	Part No.	Description
101	X-4621-848-1	HOOD ASSY
102	1-475-937-??	LCD UNIT
103	1-475-938-11	INVERTER UNIT
104	8-210-339-00	CAMERA, CCD BCX-SD11
105	1-783-860-11	HARNESS, LCD
106	3-318-382-61	SCREW (1.7X2.5), TAPPING
108	4-639-089-01	HINGE (C)
109	4-639-090-01	CABINET, MICROPHONE
110	4-639-091-01	MIC COVER
111	4-639-095-01	RUBBER (RIGHT), BLIND
112	4-639-096-01	RUBBER (LEFT), BLIND
113	4-639-097-01	RUBBER (LOWER), BLIND
115	4-639-105-01	CLAW
116	4-639-106-01	STAY
117	4-639-107-01	PLATE, GND
119	4-639-110-01	BEARING (C)
* B1	4-640-695-11	BOLT (M2.6), SPRING
B3	4-640-694-01	BOLT (M2), SPRING
B6	3-937-315-01	SCREW (DIA. 1.7X8), FITTING
B7	7-627-552-08	SCREW, PRECISION +P 1.7X2.5

6-3. FDD Assembly



Ref.No.	Part No.	Description
201	1-475-933-11	FDD
202	1-761-123-11	USB (PWB)
203	3-948-339-31	SCREW, TAPPING
204	4-636-398-01	CUSHION
205	4-639-030-02	CASE, TOP
206	4-639-031-01	CASE, BOTTOM
207	4-639-032-01	
208	4-639-033-01	
209	4-639-034-02	BUTTON, PUSH
210	4-639-035-01	FOOT
211	4-639-036-01	INDICATOR
212	4-639-147-01	SCREW M 2X5.5
213	4-639-300-01	CUSHION

ACCESSORIES & PACKING MATERIALS
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Ref.No.	Part No.	Description
*	1-777-926-31	CORD, CONNECTION
	1-783-867-11	CABLE, VGA
	1-958-977-11	CABLE, USB
	1-528-905-11	BATTERY PACK, LITHIUM ION
	A-8044-957-A	FDD 1000 UNIT (S)
	1-790-236-11	CORD, AC (EXTENSION MINIATURE)